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The Quest for Food and Furs

The Mistassini Cree, 1953–1954

Edward S. Rogers

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Résumé

Pendant une année, soit en 1953-54, un groupe de 13 chasseurs tirent partie des ressources de leur territoire traditionnel. La cellule fait partie des Cris du lac Mistassini, qui habitent encore le Nord du Québec et qui, dans le passé, ont tiré leur subsistance du rude milieu subarctique.

L'étude veut faire voir les activités de survie de ces chasseurs exploitant un fonds de ressources limité, d'où ils tirent la majeure partie des biens nécessaires à leur existence.

Avant d'aborder la quête elle-même, l'auteur, dans l'introduction, brosse un tableau du milieu des Cris du lac Mistassini. Il y analyse le cadre culturel dans lequel ils vivent et travaillent, et fait valoir les traits économiques et sociaux ainsi que les croyances et les thèmes religieux qui ont pu jouer un rôle dans la quête de subsistance. La culture matérielle n'est pas du domaine de la présente étude, puisque l'auteur en a déjà abondamment traité (Rogers 1967). La vie des Cris mistassins s'axait principalement sur la quête de subsistance, puisqu'à l'époque il y avait peu d'emplois rémunérés qui leur étaient accessibles et un très petit nombre de mesures sociales. Presque toute l'alimentation et plusieurs articles de culture matérielle devaient provenir du milieu.

La plus importante partie de l'étude concerne les techniques de production, de distribution et de consommation des biens tirés du territoire. La production traite spécifiquement des moyens de capture et de transformation des mammifères, des oiseaux et du poisson, et de la cueillette des aliments végétaux. Cette partie est très détaillée. La section consacrée à la distribution des biens fait état du partage qu'on en fait au sein de la famille, du groupe de chasseurs et de la bande. On porte peu d'attention aux relations entre le trappeur et le commerçant. La partie consacrée à la consommation s'attache à la préparation et à l'utilisation des aliments.

La dernière partie de l'étude contient des données sur l'exploitation du milieu, dans le cadre du cycle annuel. L'auteur donne des renseignements sur les espèces recherchées et l'époque de leur capture, sur le nombre de prises hebdomadaires, sur le poids net alimentaire obtenu, et sur le temps consacré à la quête.

Summary

The present study examines the way in which one hunting group composed of 13 individuals exploited the resources of their traditional hunting territory during a period of one year, 1953–54. The group formed a part of the Mistassini Cree who still live in northern Quebec and formerly extracted much of their subsistence from the harsh subarctic environment. The study attempts to present a view of the seasonal subsistence activities of this hunting group which exploited a limited resource base from which they derived a high percentage of the goods necessary for their existence.

Before the details of the actual subsistence quest are presented, a summary is provided in the Introduction of the environment within which the Mistassini Cree live and work and their cultural background including those features of the economic, social and religious systems and beliefs which played a part in the subsistence quest. No attention is given to their material culture which has been presented elsewhere (Rogers 1967). Much of the life of the Mistassini Cree revolved around the subsistence quest since at the time of the study there was little wage employment and only limited welfare. A large percentage of their food and many items of material culture had to be derived from the environment.

The major portion of the study deals with the techniques of production, distribution and consumption of the goods or products derived from the land. Production deals specifically with the means by which the Mistassini Cree captured and processed mammals, birds and fish and gathered vegetal foods. These aspects are dealt with in considerable detail. The section devoted to the distribution of goods deals primarily with the allocation of such goods within the family, hunting group and band. Little consideration is given to the relationship between the trapper and the trader. That part dealing with consumption examines the preparation of food and its final use.

In the final part of the study, the data relating to the exploitation of the environment are placed within the context of the annual cycle. Information is presented as to what species were taken and when, the numbers secured weekly, the poundage of usable food obtained and the amount of time expended in acquiring these resources.

Biographical Note

Edward S. Rogers received his Ph.D. in Anthropology at the University of New Mexico, Albuqerque in 1958. He has taught at the University of Toronto, is now teaching at McMaster University in Hamilton and is Adjunct Professor at the State University of New York in Buffalo. Dr. Rogers has been Curator of the Department of Ethnology, Royal Ontario Museum since 1964. He has published major works on the Mistassini and Ojibwa and has contributed numerous articles to both scientific and non-technical publications, including *American Antiquity, Arctic, Arctic Anthropology, Anthropologica, Southwestern Journal of Antrhropology, The Beaver, Rotunda* and Bulletins published by the National Museums of Canada. Dr. Rogers has conducted ethnological and archaeological field studies in northern Ontario and Quebec, Maine, New Mexico and south India. He is currently researching several Canadian Native groups: Ojibwa, Montagnais-Naskapi, Potawatomi and Cree.

Preface

This study is based on a year's residence among the Mistassini Indians of south-central Quebec (*see* Map 1). Ethnographic field-work was conducted from July 1953 to July 1954. From late August until early June, my wife and I accompanied Alfie Matoush and 12 members of his hunting group as they exploited their traditional hunting territory, situated near the headwaters of the Eastmain River. Most of the data in this report is based on direct observations of the way in which the Matoush hunting group wrested food and furs from the environment. Non-observable behaviour was discovered through informants, most of whom were members of the Matoush group.

The present study is not intended to offer theoretical insights into Mistassini culture or a novel interpretation of the native inhabitants of the eastern subarctic. Its purpose is rather to record the techniques employed by the Mistassini in their search for and preparation of food and furs as well as other information that may be helpful to archaeologists in their interpretation of faunal remains present (or absent) at prehistoric sites. As little attention has been given this problem by ethnologists, information is not available to archaeologists, and yet the subject merits consideration.

The Montagnais-Naskapi always place the skull of a slain bear in a tree and put the rest of the bones either on a special cache rack or in the water out of reach of the dogs. Therefore,

Map 1. The area of Lake Mistassini

the fact that the archaeological site does not yield bear bones does not indicate that bears were absent from the area nor that they were never used for food. An archaeologist is unable to arrive at valid conclusions about such situations unless he has the necessary ethnographic data. Collier (1962: 324) draws attention to this problem, and suggests that in the near future only archaeologists will deal with such ethnographic topics.

The methods by which different species of game were taken, the preparation of the game either as food or fur and the distribution and consumption of the goods produced are the main concerns of this study. To place the quest for food and furs in perspective, several introductory sections precede the main body of the text. These include a résumé of the natural environment of the Mistassini and a short description of their culture, especially seasonal activities, technology, social organization, economics, and religion. The body of the study is devoted to the subsistence activities of the people: production (the capture and processing of game), distribution, and consumption. Distribution and consumption are as important as production but much less complex, and accordingly, minimal space is devoted to them. No attention is given to economic activities not directly concerned with either the food quest or the search for furs. This seems reasonable as wage employment in 1953-54 was negligible for Mistassini living within the confines of their own territory. However, this situation is changing rapidly. Furthermore, no attention is given in this report to the local manufacture of material items, even though many of these are directly involved in the food quest. Their description is contained in an earlier study (Rogers 1967).

Acknowledgements

This study would not have been possible without the help of many people and financial assistance and aid from various organizations. Mr. and Mrs. Wilfrid Jefferys, then of the Hudson's Bay Company, Lake Mistassini, paved the way in many instances and gave generously of their support during the course of field-work. I wish to thank my wife who accompanied me and prepared the linguistic transcriptions used in this work. Also I am grateful to Mr. Harold VanStone who prepared the maps, graphs, figures, and some of the tables and to Miss Ann Ottesen who compiled the numerical data from fieldnotes. But most importantly, it was Alfie Matoush and members of his hunting group who really made field-work possible. Without their willing cooperation and generous assistance the work would have been greatly curtailed.

I am indebted to the Arctic Institute of North America for a grant-in-aid, the funds for which came from the Office of Naval Research. Finally, I would like to acknowledge with gratitude the Royal Ontario Museum which gave me the time and facilities necessary to complete this study.

Introduction

Environmental Background

The Mistassini live in the Boreal Forest of the Canadian eastern subarctic. Their country is part of the Precambrian Shield, a land underlain with ancient igneous and sedimentary rocks and covered with a mantle of glacial debris deposited during the Pleistocene. The country is relatively flat, although low ridges of bedrock and glacial deposits occur. The landscape is interlaced with streams uniting innumerable ponds and lakes and dotted with areas of muskeg. The greater part of the region is at an elevation of from one to 2,000 feet above sea level but the Otish Mountains near the headwaters of the Eastmain River rise to an elevation of over 3,000 feet.

The climate (Cameron and Morris 1951: 121, Ekblaw 1926: 104–105; Hare 1951: 658, Fig. 2; Low 1897: 29L; Rogers 1963*a*: 7) is continental with long cold winters and short, relatively warm summers. The coldest months are December, January, and February with temperatures from -45°F to -64°F, depending on location. These minimal temperatures occur at night with the low generally just before sunrise. During the day, the temperatures reach the maximum by early afternoon. This daily rise in temperature is important to the people since normally they are outside only during the day. In summer, daytime temperatures vary between 40°F and 90°F. The nights are cool but there is no frost during July and usually not during June and August. Summer is short and by September frost may occur and even an occasional snowflurry. By the end of October or early November, the snow that falls remains on the ground. At this time, ice forms on the smaller lakes and streams, but the larger bodies of water usually do not freeze before December. Spring begins in April when leads of open water appear. The snow melts during the day, and at night a crust forms on the snow. The Mistassini take advantage of this and usually travel in the early morning before the crust has melted. By the middle of May the snow is gone, except at higher elevations, and the ice from the lakes and rivers has been carried downstream.

Northwesterly, westerly, and southwesterly winds prevail all year. During summer, southwest winds predominate bringing with them warm weather and light rains. Northerly winds are generally cool, especially during the early part of summer. Northwest winds are frequent during the winter and bring clear, dry weather. Winds from other directions are usually accompanied by storms. Strong winds are frequent during January and February, and the Mistassini fear them since they are generally accompanied by low temperatures and the danger of freezing is greatly increased.

Precipitation is not excessive, and averages about 30 inches per year. Two-thirds of this falls during July, August, and September, generally in the form of drizzle with an occasional thunderstorm. Snow covers the ground all winter. Although 100 inches of snow may fall, there is usually no more than three to five feet on the ground at any one time. This mantle of snow delays the freezing of the soil so that generally only the top few inches freeze. The ice on the lakes reaches a depth of several feet.

The country inhabited by the Mistassini is forested except at high elevations, such as the Otish Mountains (Cameron and Morris 1951:

121–22, Ekblaw 1926: 106; Hare 1950: 616–18, 622, 624; Weaver and Clements 1938: 487–92), but the trees are small in diameter and short, rarely exceeding 50 feet in height. Black spruce predominates, with white spruce and balsam fir in lesser amounts. Larch grows along the watercourses while cedar is found only in the southern part of the area. Birch, poplar, and banksian pine are seen here and there throughout the area.

Frequently forest fires ruin areas for trapping and hunting, upsetting the subsistence quest of the Mistassini. In time, however, the growth of berry bushes and shrubs provides ideal habitats for bear, moose, and beaver, key species in the life of the Mistassini Indians.

The banks of the streams and lakes are normally covered with a thick growth of shrubbery, principally willows and alders. Blueberry bushes occur in areas recently devastated by fire. Also present are Labrador tea and sheep laurel. Mountain ash, bird cherry, and raspberry occur in limited quantity. Herbaceous growth is not extensive. Lichens are common, especially in the more open forest areas in the northern part of the territory. Tracts of muskeg covered primarily with sphagnum moss and edged with larch and occasionally black spruce are numerous. The lakes are devoid of vegetation except for those with a silty or muddy bottom in which pond lilies grow and along the shores of which grow reeds and sedges.

Mammals (Cameron 1956: 60; Cameron and Morris 1951: 122–25, 128–29; Rousseau 1949: 36) indigenous to the area are caribou, bear, beaver, otter, mink, marten, fisher, ermine, fox, muskrat, lynx, wolf, wolverine, skunk, hare, woodchuck, red squirrel, porcupine, mole, shrew, mouse, flying squirrel, chipmunk and bat. Moose are recent, having entered the area within the last 50 to 75 years. The various species are unevenly distributed throughout the territory because of such factors as forest fires, topography, varying plant associations and serel stages, and the intensity of hunting and trapping. Furthermore, certain species undergo periodic fluctuations in numbers which upsets the economic equilibrium of the Mistassini.

Bird life (Godfrey 1949; Taverner 1945; personal observations) varies with the season. During the winter there are a limited number of such permanent residents as Canada jay, spruce grouse, ruffed grouse, chickadee, pine grosbeak, and white-wing crossbill. Ptarmigan and snowy owls from the north increase the number of winter birds. During the summer, a variety of birds nest in the area—common and red-throated loon, black duck, American golden-eye, American merganser, red-breasted merganser, osprey, spotted sandpiper, greater yellowlegs, herring gull, common tern, great horned owl, nighthawk, kingfisher, crow, and many song birds. During the spring and fall, waterfowl pass through the area—Canada goose, snow goose, brant, green-wing teal, old-squaw, white-wing scoter, surf scoter, American scoter, and red-throated loon.

Fish (Low 1897: 70L, 329L–332L) are not plentiful, but most of the species occur throughout the area. Those commonly caught are lake trout (in certain areas), speckled trout, whitefish, pike, and common and red suckers. Walleyed pike are found only in the southern part of the territory and sturgeon only in the west-

ern part. The quantity and species of fish varies from one body of water to another. In addition, there are seasonal movements of certain species to and from their spawning grounds. Whitefish and trout move on to their spawning grounds during the fall and other species do so during the spring.

Invertebrates are plentiful, particularly during the summer months. These include moose flies, deer flies, black flies, sand flies, mosquitoes, head lice, and fish tapeworms.

Cultural Background

Economic and social features of subsistence

The Mistassini Indians were predominantly a hunting, trapping, and fishing people and therefore, had to move about the country during the course of the year in search of game (Rogers and Rogers 1959). Two major movements occurred. With the advent of spring or early summer, the people gathered about the trading posts at the southern end of Lake Mistassini. As fall approached, the inhabitants of the settlement left in hunting groups for their own winter territory. With the return of spring, each group broke camp and made its way back to the summer encampment. The Mistassini "migrated" between two residential centres: the summer encampment and the winter camps.

In presenting the sequence of events, eight periods are defined. The first is Fall Travel. Starting in the middle of August, the various hunting groups collected their supplies and equipment for the winter and then departed for their hunting territories. The Matoush group consisted of the following personnel and equipment:

Personnel:
2 married men
2 married women
2 teenage boys
1 teenage girl
6 children

Equipment:
7 dogs, 2 puppies
6 canoes
4 motors
4,500 lb. of food
600 lb. of personal effects (estimate)
600 lb. of gasoline (estimate)

The territories were usually reached in September. During the move, time

was taken to set gill nets, and the fish which were caught were either consumed immediately or else dried for use during the following weeks. Waterfowl and muskrat were hunted and snares were set for hares. Occasionally moose were hunted.

Once the group reached its land, the second period which may be designated as the Fall Hunt began. This period lasted several weeks. Camp was established (*see* Map 2) in a location favourable for hunting and fishing. The men left camp to search for moose, caribou and bear, sometimes staying out for several days at a time. As soon as big game was caught, hunting was discontinued until the kill had been processed. If there was time afterwards hunting was resumed. Muskrats and waterfowl supplemented big game. Fishing was important and both men and women set and tended gill nets. The fish taken were partly dried and were eaten by the men when hunting. Occasionally, the women and children gathered blueberries.

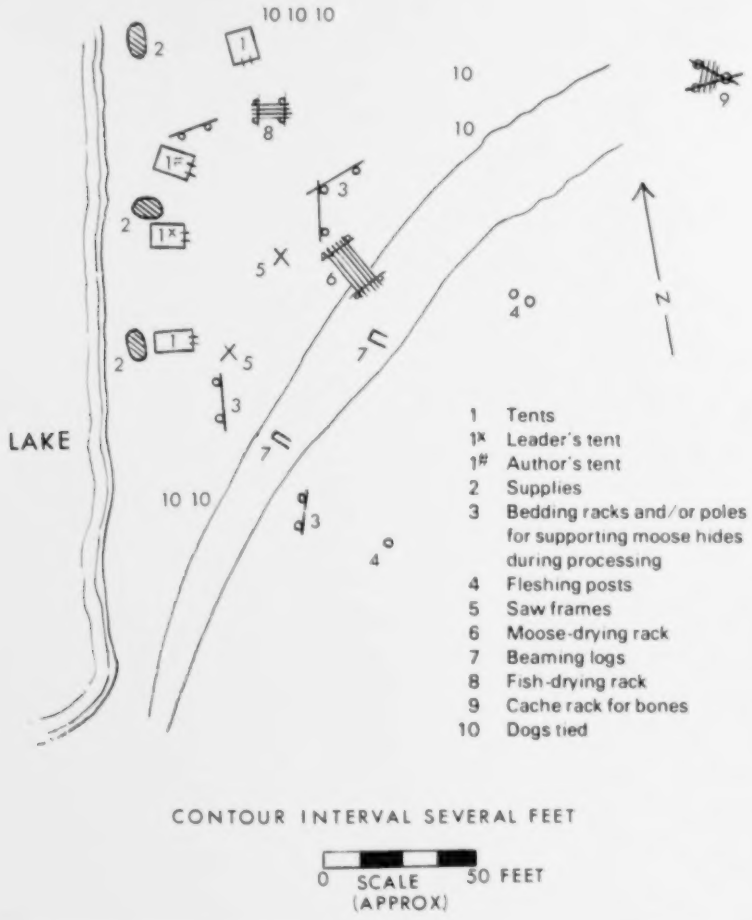
About the middle of October, the group moved again, this time to establish more permanent quarters for the early winter. This period, which covered several weeks, may be termed Winter Camp Construction. A log cabin was built that usually housed the entire group. Other structures such as supply tents and cache racks were also erected.

By the end of October or early November, camp construction was finished, the lakes and streams were freezing over and snow was accumulating. This initiated the fourth period, Early Winter Trapping. The men set their traps within the next month to a month and a half. They were away from the camp from a day to two weeks at a time, and on their return remained in camp for a few days to tend fishnets, mend equipment, make new items, procure firewood, and set traps close by. The women made short excursions to hunt spruce grouse and ptarmigan and to set a few traps near camp. These activities continued until the end of the year. During the first part of January, those groups which had large territories collected traps and made preparations for moving. This move inaugurated the fifth period, The Winter Hunt. Trapping was continued, but less intensively than during the Early Winter Trapping. More time was devoted to hunting moose and caribou. Fishnets were placed under the ice, although few fish were caught.

Starting in early April, the hunting groups returned to where they had left their canoes the previous fall. This mobile period which lasted until the end of the month is included in The Winter Hunt. During the move, the men occasionally went in search of moose and caribou.

With the return of spring, life became easier. Camp was established near the fall encampment so that the canoes which they had left there could be retrieved. This period may be called Spring Trapping, since the men went after muskrats intensively and also hunted waterfowl. Fishing was important since food resources had been depleted during the winter months and they were able to make large catches with a minimum of effort.

Toward the end of May, the hunting groups made plans to return to the summer encampment. This return trip can be referred to as Spring Travel. As soon as the ice had moved out of the lakes and rivers, each group left its territory and hastened to the set-



Map 2. Fall camp

tlement at the south end of Lake Mistassini. They spent little or no time hunting or fishing along the way.

Generally, by early June all the hunting groups had gathered on Lake Mistassini. The following period, Summer Encampment, was largely a time of relaxation after the strenuous winter months of trapping and hunting. No trapping was undertaken and very little hunting. There was some fishing but the catch was small, perhaps because so many people fishing in a localized area drastically reduced the fish population. A few men acted as guides for fishermen and helpers in prospectors' camps.

In 1953-54 the Mistassini still lived in large measure by hunting,

trapping, and fishing. In the past, to secure the game necessary for existence a number of different pieces of equipment were employed. Game was secured with bows and arrows, beaver and otter nets, thong snares, composite bone and wood fishhooks, deadfalls, gill nets and sturgeon spears. But over the years, the equipment used altered as the Mistassini became more closely allied with the traders. At the time of field-work, mammals were killed with shotguns and rifles and taken in steel traps, wire snares, and occasionally deadfalls; slingshots were used to kill small game. Birds were shot with rifles and shotguns. In hunting ducks, the hunters sometimes concealed themselves behind a blind erected on shore or else in the bow of a canoe and at times they used decoys. Gill nets were the major means employed for the capture of fish, although not infrequently steel hooks were used. Vegetal foods were so rarely gathered that the only equipment consisted of metal containers for berries.

The processing of game required a number of different types of tools and equipment. Knives, axes, and bone fleshers were used in the dressing of game. The resulting cuts of meat were often smoked and dried on special cache racks. All food was cooked in metal vessels. Large kettles were used for rendering moose and caribou fat. Hides were cleaned of their subcutaneous tissue with fleshers and fleshing posts and of their hair by first docking it with a knife and then removing the epidermal layer with a beamer and beaming log. For preparing and finishing off hides various types of scrapers and frames were used.

In order to exploit the environment of central Quebec, which is poor in natural resources, the Mistassini had to move frequently. Since there were no roads and the Mistassini could not afford cars in any event, motor vehicles were not used. Air transport, although feasible, could rarely be used because of the prohibitive costs involved. Therefore, man power was the main motive force. During the months of open water, canoes were used. For travelling they were usually powered by outboard motors, but for hunting excursions they were usually paddled. Overland travel was infrequent except when the men were in search of game. Goods were moved, when portaging from one waterway to another or to avoid rapids, by back packing using a tumpline. During the winter different transportation was needed since the lakes were frozen and the land was covered with snow. Toboggans drawn by men, occasionally helped by a dog, sleds pulled by dogs, and snowshoes were the means of travel. In addition, a *nimipan* ("ceremonial carrying string,") was, on occasion, used for dragging beaver and otter home over the snow. In general, travel was slow except in summer when motors or sails could be used on lakes and rivers. However, in winter, a man might cover as much as 50 miles in one day on snowshoes, although this was not common. When moving camp during the winter, five to 10 miles was the normal distance traversed in one day.

During the winter adequate protection from the weather was vital if the Mistassini were to work outdoors. Clothing, except for moccasins and mittens, was of European derivation, obtained from the traders or made locally by the women copy-

ing Western styles. Less clothing was needed outdoors than one might expect because the men worked rapidly and maintained a high body temperature. Also they stopped about every two hours to build a fire and have tea and perhaps something to eat. Shelters were of several types: log cabins, canvas tents, and occasionally canvas-covered native structures such as the dome-shaped lodge. Stoves fueled with wood usually kept the shelters warm and comfortable.

The Mistassini Indians derived the greater part of their food from the land and a limited amount from the lakes and streams. They were not, however, totally self-sufficient; they had to obtain some foods, such as flour, lard, tea, beans, sugar, and oatmeal, from the traders in exchange for furs. There was little wage employment.

Each hunting group had a section of the total Mistassini territory to which it usually returned each year for food and furs (Rogers 1963*a*). At the time of field-work the Federal Government was in the process of establishing trapping territories and assigning a section of land to each man. This was not the way in which the Mistassini themselves conceived of their land. In actual practice each territory was used jointly by all members of the hunting group, not divided among the nuclear families. Territories were not named but were referred to by the names of the lakes and rivers on which winter camps were regularly established. A territory was not defined by absolute boundaries but rather it was thought of as a series of traplines radiating from the winter camp. These clusters of traplines did not, as a rule, overlap those of neighbouring groups. A mutually accepted boundary ran between the farthest extents of neighbouring traplines and was vaguely defined within limits of several miles. There did not seem to be much attention paid to trespassing. A man had the right to take game for food if he and his family were in need, and resources such as fishing grounds, berry patches, firewood, boughs, waterfowl, and wood for the manufacture of various items were considered communal property. Hare, muskrat, moose, and caribou may also have been considered communal property.

The members of the hunting group generally returned each year to their own territory. But sometimes families went elsewhere for a year or two either because of a deficiency or an abundance of game in a particular territory or because of an illness that prevented the family from reaching its land.

Hunting territories varied in size, partly as a result of the relationship between the number in the hunting group and the productivity of the habitat. Territorial sizes varied from a maximum of 2,000 to a minimum of 300 square miles. The average area exploited by each hunter was 260 square miles.

As previously stated, a large part of the food consumed by the Mistassini was obtained directly from the land. The Alfie Matoush hunting group is an example. About 70 per cent of their food came from the land (Rogers 1963*a*: 35–36). Of prime importance both in fact and in the eyes of the people were moose, caribou, beaver, and bear. All four were classed as "big game" and were eagerly sought during the winter months and, except for beaver, occasionally during the summer. Other

Table 1. Income and expenses of the Matoush hunting group, 1953–54[a]

	Alfie Matoush and family		Charlie Coom and family		Sam, William and Sarah Matoush	
Credit (July 1953)	$150.00				$26.42	
Debit (July 1953)			$157.21			
Income						
Fur						
Beaver	(15)	$149.85	(15)	$207.90	(25)	$186.30
Mink	(40)	546.00	(34)	467.00	(58)	699.00
Otter	(4)	82.00	(1)	17.00	(5)	75.00
Muskrat	(53)	38.75	(11)	6.00	(56)	39.10
Weasel	(62)	32.55	(44)	21.40	(119)	61.75
Squirrel	(12)	1.10	(2)	.20	(3)	.60
		$850.25		$719.50		$1061.75
Labour						
Guiding (approx.)		$ 45.00		$ 30.00		?
Mittens and moccasins		46.00		?		none
		$ 91.00		$ 30.00		?
Government Aid						
Family allowance		$132.00		$360.00		none
Sick and destitute Relief (food)[b]		(516 lb.)		(1032 lb.)		(1196 lb.)
Total		$1073.25		$1109.50		$1061.75
Expenses						
Food		$ 310.63		$ 354.59		$ 351.05
Equipment[c]		235.06		161.85		126.40
Clothing		94.75		99.19		41.45
Miscellaneous[d]		507.29		477.39		508.45
Total		$1147.73		$1093.02		$1027.35

[a] Through the courtesy of Mr. Wilfrid Jefferys, Manager, Hudson's Bay Company, Lake Mistassini. Note that discrepancies between totals of income and expenses result from a debt owing (col. 1) or credits (cols. 2 and 3), as of July 1954.

[b] Flour, oatmeal, sugar, beans, rice, cheese, salt, tea and pork. Food is shown in pounds, not in terms of cost.

[c] Guns, traps, snare wire, shells, nets, twine, tumplines, saw blades, files, stoves, poling irons, thread, needles, pins, knives, cups, oil, soap, matches and tent canvas.

[d] Tobacco, air freight during the winter, and cash expenditures during the summer for canned foods and other items for which there were no counter slips.

mammals eaten were otter, mink, marten, muskrat, lynx, hare, woodchuck, and squirrel. The latter were usually given to children. Fish were of considerable importance as supplementary rations when mammals were difficult to secure. Only at freeze-up was it impossible to fish. Waterfowl, ptarmigan, and spruce grouse were the most important birds for supplementary food at certain times of the year. Vegetal foods played only a small part in the food quest, and gardening (potatoes) was undertaken by very few individuals.

The other 30 per cent of the food consumed by the Matoush group in 1953–54 was derived from the stores located at the south end of Lake Mistassini. This food was acquired principally through the sale of furs to the trading companies.

Wage employment was minimal and engaged in, as a rule, only during

summer when some of the men worked as guides for fishermen. Occasionally there were odd jobs to be done for the traders at the settlement. A few men were employed by prospectors. A few of the women made mittens and moccasins for sale at the trading posts. Table 1 gives a breakdown of the income and expenses of the Matoush hunting group for the period from the summer of 1953 to the summer of 1954.

Although economic organization was essential, the way in which the Mistassini were socially organized was of equal importance. Hence, a few words are necessary regarding social organization. The social structures of importance were the community, the hunting group, and the nuclear family.

The Indians who gathered during the summer at the southern end of Lake Mistassini formed a more or less stable unit. Rarely did families splinter off and move to other communities or foreign families enter the community. In the past, such gatherings or groupings have been referred to as "bands." At Mistassini, in the past, several bands—Nichicun, Mistassini, Neoskweskau, Chibougamou, and a part of the Nemiscau—spent the summer near the trading post. At the time of this study, these bands were in the process of fusing into a "deme" (Rogers 1963*b*: 73–74). The deme did not perform any economic function except at feasts when food was distributed. Such feasts were infrequent and given, so far as is known, only in conjunction with marriages.

The Mistassini deme was composed of a number of hunting groups which came into operation primarily during the winter months when the people were away from the settlement and established at their winter camps. During the summer what limited cooperation there was between adults often cut across the boundaries of the hunting groups.

The hunting group consisted of the largest number of families who lived together during the winter months. The group was generally composed of from three to five nuclear families, and their dependants if any and as a rule all members of the group were closely related. Four families was the ideal with four adult males who could hunt and trap together, generally in pairs. Usually, each family lived in its own lodging in close proximity to the others, but during the period of early winter trapping they might all live together in a communal lodge. The hunting group travelled together during the winter and to and from the summer encampment.

Economically, the hunting group was one of the most important units in the Mistassini community. The men cooperated in hunting and trapping, especially when this entailed being away from camp for more than a day. When they were hunting caribou, all the men of the group worked together, but for other pursuits they usually went in pairs. Meat for domestic consumption was normally shared by the whole group, especially bear, moose, caribou, and beaver meat and also waterfowl, grouse, and lake trout. The hides of moose and caribou were shared but usually the pelts of fur-bearing animals were not.

The men of the hunting group confined their cooperation mostly to hunting and trapping, which, of course, comprised a large part of the yearly activities. In other economic tasks the men tended to work within the confines of and solely for the

family, though they would lend tools and equipment to other families. The women did not have as many co-operative activities as the men; they associated more for companionship. They often went together to pick berries or gather boughs, but each woman only collected for her own family. However, when one mother was away another would care for her children, and they helped each other at childbirth and during sickness. There were, of course, other activities, such as games, feasts, drumming, and Christian services, in which the members of the hunting group joined together.

The nuclear family, another basic unit, was becoming increasingly more important as it became less integrated in the hunting group. It was of prime economic importance. The husband secured the food and furs necessary for its existence and the wife cared for the family tasks. It was a closely knit unit, dissolved, in general, only through the death of one or both of the parents.

The religious aspect of subsistence

Formerly, religious observances were intimately involved in the food quest, and to a certain extent they still were in 1953–54. The Mistassini believed that it was only through the proper ceremonial acts that man was able to wrest from nature his means of livelihood. Unfortunately, no direct information could be elicited regarding the "Game Ruler" concept as reported by Speck (1935: 82) for such animals as caribou. The behaviour observed certainly suggested such a concept. The bear was the most important animal from a religious point of view. Caribou and beaver were close seconds. Other species that appeared to play a part in the religious life of the people were otter, lynx, hare, loon, duck, lake trout, and possibly "partridge."[1]

The special treatment accorded the bear consisted of the following: the hunter spoke to the animal before and after slaying it, gave it tobacco, dressed it inside the lodge, drew a mark on the skull, prepared a chin-skin "charm," erected the skull and paw bones on a tree trunk, sometimes painted the skull, placed the other bones on a special cache rack, held a bear feast, and saved the hide for one year before using it.

For caribou, the antlers were erected on horizontal poles, the bones were placed on a special cache rack, except the scapulae which were hung in a tree, a ceremonial hide was prepared, and a caribou feast was given. The treatment of moose may have been an imitation of that for caribou since moose were late arrivals in the territory of the Mistassini. The significance of this special treatment may or may not have been the same so far as is known but no ceremonial moose hides were prepared. The antlers were erected on a stump, and the bones were placed on a special cache rack.

Another observance consisted of suspending beaver skulls, duck wings and upper bills, breast bones of loons, and large trout mandibles on a pole or in a tree. Bones placed on a special cache rack, besides those already mentioned, were otter, beaver, lynx, mink, duck, loon, and large trout. In addition, trout and hare/"partridge" feasts were given occasionally. So far as could be ascertained, only bones of hare, "partridge," and fish were

[1] The Mistassini use *partridge* as an all-inclusive term covering the various species of grouse and ptarmigan.

fed to the dogs. It was said that if these observances were not attended to, the hunter would not be able to secure game in the future. The special treatment of game animal remains was seemingly a means of "pacifying" the "spirit" of the deceased animal or the ruler of the species.

Bear skulls and perhaps skulls of other animals and antlers were placed facing east to southeast because it was considered "good luck" and would ensure "a good hunt that winter." Similarly, the ceremonial caribou hides were hung with the anterior ends towards the east-southeast direction and lodge doors usually also faced this way. The direction of the setting sun was not considered "very good." Bodies were buried with the head oriented towards the setting sun. These data suggest that the east was the land of the living and possibly the home of the Game Ruler(s) while the west was the land of the dead.

Besides these observances, there were certain rituals, divinatory in nature, performed in connection with the hunt. The Shaking Tent Rite was performed in order to learn the location of game, and the future was predicted by drumming. Drumming was of special importance in the fall since that was the time for predicting game resources for the coming winter. So far as is known, the performance was always given in conjunction with a feast. By drumming, an individual determined whether he would have success in hunting. In the past, the Sweat Lodge was employed during the fall to predict the outcome of the winter hunt and often again just before a hunt began. Dreams were of extreme importance and often indicated to a hunter the presence or absence of game, its location, and whether or not he would kill it.

Other forms of divination used bear patellas; beaver tail, leg and pelvic bones; caribou and moose scapulae; caribou lower jawbones; mink carcasses; muskrat skulls; otter game; caribou game; otter forepaws and tailbones; grouse sterna and furculae; and a lighted match.

There were two methods of divining with a bear's patella, which were done only by men. One was to place the patella on the top of a hot stove. If it began to move and continued to do so, it meant that the hunter would kill as many as six bears during the course of the coming year. If the patella did not move, he would not kill any bears. The second method consisted of placing the patella on the floor about six feet in front of the hunter. The hunter then closed his eyes and tied a cloth around his head covering his eyes and tried to pick up the patella. If he succeeded, he would kill one bear; if he missed, he would kill none.

Divination using a beaver tailbone was practised infrequently by the old men. Sometimes the tailbone of the first beaver taken in the fall was used. Late at night, after the women and children had gone to sleep, several old men gathered about the stove in the dark. When the fire had died down, the tailbone was placed on the coals. If the bone crackled and sparks were emitted, it was a sign of good hunting. The noises indicated that the hunters would be firing at game during the coming winter and that bears, moose, and caribou would be taken. If no noises were heard, then luck would be bad, and it was not a propitious time to start hunting.

Breaking the tibia of a beaver was

formerly a means of divination among the Montagnais-Naskapi (Speck 1935: 161–62), although one informant claimed it had been merely "play" engaged in by a group of men. However, the term "play" was often used by this informant to designate religious performances such as the Shaking Tent Rite and drumming. At the time of field-work, breaking the tibia appeared to be simply a trial of strength which women and children sometimes tried also. The tibia was wrapped in a piece of cloth, and then the ends grasped in the hunter's two hands. An attempt was made to break the bone by bending it.

Another form of divination was performed with the pelvic bone of the beaver. The hunter grasped the bone in one hand, raised it over his head, and attempted to thrust the index finger of his free hand through the hole in the pelvic bone, without looking at his hand. If he succeeded, it meant that he would have a successful hunt. The same procedure was followed when the hunter wished to determine whether he was going to find a new beaver lodge. If successful in placing his finger in the hole, he would locate a new one the same day.

Scapulimancy, using caribou and moose scapulae, was practised by old men to determine the location of game and people. The scapulae must be from young animals since the big blades of older animals would not scorch properly. A scapula was placed on the coals of a fire for a moment and then examined. One of the burned spots indicated the hunter's camp, the others the positions of game in relation to the camp. Any lines produced represented trails. One informant claimed that lines were drawn on the blade of the caribou scapula before it was placed on the coals, and he demonstrated with a drawing. Near the distal end of the shoulder blade was the location of the hunter's camp. Along the spine was a trail. Near the end of the spine, he drew three oval areas and connected them to the spine with lines that represented trails. The areas were then apparently named, presumably corresponding to particular portions of the hunting territory. Finally, the scapula was placed in the fire. If the areas drawn on the blade of the scapula burned, it meant that game was to be found there. If they did not burn, there was no game at these locations.

The lower jawbone of a caribou was used for divination by boys as well as by men. The ascending branches of the jawbone were grasped by the hunter, the jaw being held right side up in front of his body with the symphysial region pointing outward. The two dentary bones were then pulled apart. When the jaw broke, the direction in which it pointed indicated the location of caribou.

Before leaving for a hunt, the men sometimes predicted their success in the following way. A hunter skinned a mink and cooked the carcass on a spit. Then he suspended the carcass from 1 to 1½ feet from the floor by a string attached to a pole overhead inside the lodge. Next, the hunter called together the men who would go on the hunt which was sometimes as many as 15 men. The men placed themselves in a circle around the carcass and each held a dish he had brought in front of himself. The hunter inserted a piece of of "punk" in the mink's mouth, and twirled the carcass in a circle. If the sparks from the "punk" fell into a hunter's dish it indicated that he

would have good luck hunting. If the sparks missed his dish, it meant that he would have bad luck. When a spark landed in his dish the hunter stood up and danced on the spot where he had been sitting.

A muskrat skull was sometimes employed for divination. A short stick was pushed into the nasal cavity of the skull. The participants, including women and children, sat in a circle. The skull was tossed into the air, and a question such as "who is going to draw water?" or "who is going to kill the most muskrats?" was posed. When the skull landed, the stick in the nasal cavity pointed to the individual who would perform the action or be the recipient of the answer.

Speck stated that among the Mistassini the "otter game" was a form of divination (Speck 1935: 198). However in the course of field-work no explicit statement to that effect was secured nor was a reason given for its being played. The game played by the men and older boys, required a bow approximately a foot long, 10 arrows, each about eight inches long and blunt at the distal end, and 10 bundles of twigs, each representing an otter. The bundles were placed from five to six feet in front of the hunter, who then tried to hit each bundle with arrows shot from the miniature bow. When a bundle was struck it was removed and the hunter tried to strike another bundle. When he had finished another hunter took his place.

The "caribou game" may have been divinatory (Speck 1930: 426), but as with the "otter game" no confirmation could be secured. One informant had heard of the "rabbit game" (Speck 1930: 429), but since he had never seen it played he could not give any details except that it was a game with magical rather than divinatory significance.

Another form of divination used the forepaws of an otter. The hunter grasped the wrist of a forepaw in each hand and then, starting at the centre of his forehead, drew the pads of the paws across his brow towards the sides of his head and down each cheek. He did the same thing again and then tossed the paws into the air. If they fell with the pads up, it meant that the hunter would soon see an otter. If only one pad turned up, it indicated that it would be some time before he saw an otter. It was a bad omen if both pads were down; it meant that the hunter would not see an otter for a long time.

Men also used the tailbone of an otter for divination. On the night preceding a hunt, the hunter wrapped the bone in a clean cloth and hung the bundle at the door of the lodge. The next morning, he removed the bundle before anyone passed through the doorway. If there was "hair" on the bone when he opened the bundle, he would kill game during the winter. The "hair" was interpreted as belonging to the moose, caribou, or bear he would kill.

The sterna of ptarmigan and grouse were scorched to determine the location of game or people, whenever information about either was required. Although one informant claimed that formerly only "old men" used sterna, on three occasions during field-work I observed men in their thirties scorching sterna. However, children were not allowed to participate. The keel of the sternum was rested on the coals of a fire. The burns that resulted were read from the opposite side of the keel by holding the bone up to a light. The markings were interpreted in the same

way as those on caribou and moose scapulae. This form of divination was still considered a "little bit good."

The furcula, or "wishbone," of ptarmigan and spruce grouse were used by two people for divination. Each grasped an end of the furcula and pulled, breaking the bone. The individual who obtained the longest piece would kill a ptarmigan or grouse the next day. I observed a father carefully explaining to his son how to pull the bone so that he would get the longest piece.

A burning match held upright between the thumb and index finger was sometimes used to determine the whereabouts of otter. As the match burned, the direction in which it bent indicated the direction in which there was an otter. If the end of the match bent completely over and turned back on itself, it meant that the animal was nearby. If the flame died when the match had bent only slightly, the otter was very far away.

One of the reasons that feasts were held was because of the Indians' regard for animals and their concern with the outcome of hunting. Only this type of feast will be discussed in this paper. The variety of animal feasts included the following: otter, beaver, beaver "eat-all," caribou, moose, bear, hare and grouse, and large lake trout.

An informant stated that whenever caribou, bear, or beaver were slain a feast was given. All the meat secured by the hunters was placed in the charge of one man who then prepared the feast. On the appointed day, he directed several boys to secure long logs and build a fire. The meat was placed in large kettles which were then rested on the logs. When the meat was cooked, he sent a boy to tell all the people to come. The feast giver sat at the centre of the rear wall of the lodge, and the others sat along the sides. He told the guests to place their plates on the floor. Then, the meat and fat were served by the men, except the one giving the feast, who sat and smoked. My informant was not sure of the order of events preceding the meal. Apparently, the man's son first placed some meat and bear grease in the fire to insure that no one would be ill when he ate the feast food and that there would be successful hunts in the future. Then if it was a bear feast (Rogers 1963*a*: 65–67 for a description of a bear feast witnessed), his father told him to take the kettle of bear grease and rub some at about shoulder height on each doorpost on the inside of the lodge and at the two lodge poles at the rear of the lodge. The son then placed the kettle back in front of his father. The father rubbed some grease through his hair, drank some from a grease ladle, and finally, ate a piece of the bear intestine that was in the kettle. The man now told his son to take the kettle containing the grease and intestines to the others present. They repeated the old man's performance. My informant said that if bear grease was not available, caribou, moose, or beaver grease would be used. Presumably, the same procedure was followed at a caribou, moose, or beaver feast. The evidence suggests, however, that grease was applied to the lodge poles only at the bear and second fall feasts. The old man giving the feast, and only he, then drummed and sang for a short time before inviting the others to start eating. After everyone had eaten, the men took turns drumming and singing. There was dancing, sometimes until dawn. Presumably, both the men and the women danced. The

man who had prepared the feast was last to sing and drum. This type of feast, so far as the evidence goes, is no longer given.

The same informant recounted the following descriptions of five specific animal feasts.

The beaver "eat-all" feast was divinatory. The first large beaver that was taken by an "old man" at the start of the fall hunt was prepared for a feast. The "old man" built a fire outside the lodge, then he singed the hair of the beaver and boiled the carcass. When the meat was cooked he summoned all his "friends." Everyone came—men, women, and children. If they ate all of the beaver, it meant a good winter, but if they did not, everyone would be hungry that winter. Afterwards the men drummed and sang.

Occasionally an otter feast was prepared by one of the old men at Mistassini. Whether this feast was of common occurrence is not known. The otter was first singed to remove the hair. As the hunter did this, he asked for "help" during the coming year to "make a good living." He also asked for a long life. The otter was then cooked and a feast given.

A feast was held whenever caribou were killed. If the hunter were a young man, he gave the meat to his father, who prepared the feast. The head, cut into sections, the sternum, the ribs and probably the vertebrae were prepared and served. Sometimes, the legs were kept for a second feast at a later date.

Occasionally, a rabbit/"partridge" feast was given, when a hunter had killed 25 to 30 "partridge." In addition to the "partridge," hare and bear grease were served.

Another feast, of lake trout, was given when a hunter had caught one or more especially large fish. For this feast the fish were boiled.

There were five seasonal feasts, but only three were concerned with subsistence—two in the fall and one in the spring. The first was held before the fall hunt began and was generally a "little feast," since at that time of year provisions were apt to be low. The second fall feast was given after the early winter lodge had been constructed and the lakes had begun to freeze. It was a large feast unless the fall hunt had been unproductive. Sometimes ceremonial caribou hides were displayed at the feast to insure good luck in hunting. They were draped over *nimapan* that was stretched between two trees or posts. The posts or the trees were situated so that the anterior ends of the hides faced east or southeast. Some individuals brought the hides inside for the night. It is not known whether ceremonial hides were hung outside on occasions other than this second fall feast, although one informant declared that one old man at Mistassini hung a ceremonial hide outside for one day every winter. These seasonal feasts were much the same as those previously described. After eating, the men drummed and sang to predict the future hunting prospects. The spring feast, however, was apparently given in thanks for a successful winter.

Capture and Processing of Mammals

A variety of different techniques was used to secure different species of mammals and birds depending on the habits of the game and, occasionally, on the time of year. Each family processed its own game. The general pattern of game dressing was much the same for all species: there were two basic ways of skinning a mammal—open or cased. Bear, caribou, moose and beaver were skinned open. The pelts of all other mammals, except porcupine, were cased. Porcupine were not skinned; only the quills were removed. The method of dismembering a carcass was also basically similar for all species. Variations were due primarily to differences in the size of the animal being dressed. The limbs were usually severed at the joints, and whenever possible the meat was cut with the grain, so that as little blood as possible would be lost.

Moose

Moose were killed throughout the year although they were hunted most intensively during the early fall and from late winter to early spring. The Matoush group took moose at the following times: the week of September 28 they secured three moose; the week of October 12, one moose; the week of November 9, one moose; the week of March 8, one moose; the week of March 22, one moose; and the week of April 21, three moose.

The most common method of hunting was tracking. In September and October, during the rutting season, a moose call was occasionally used to attract bulls to within gunshot. During winter, "moose yards" were sometimes sought. These were situated in sheltered localities with a favourable food supply of birch or white spruce. Here one or more moose gathered and kept paths open along which they were able to secure food. A .30-calibre rifle was generally employed to kill moose, although a .22-calibre might be used. Moose were sometimes killed with an axe. This was done when no gun was available and the animal was found swimming. The hunters—women have also been known to do this—pursued the animal in a canoe and on overtaking it, administered the fatal blow.

When more than one moose were killed, it was generally not possible to dress and transport them to camp the same day. In this case, the hide was slit from the crotch to the throat along the ventral line so that the viscera could be removed. Sometimes the heart, the liver, and a little meat of each animal were taken to camp. Sometimes the legs were completely severed at the tarsal and carpal joints, and were left attached only by the large tendon. The head might be removed from the carcass. Occasionally, the hide was slit down the inside of each leg from the ventral cut. After this had been done and if it was winter, the carcass was covered with about a foot of snow. On top of the snow, spruce saplings were placed. At other times of the year, the carcass was covered with saplings alone. The hunter then returned to camp blazing a trail along the route.

When the hunter reached camp, he went directly to his own lodge to announce his success by displaying the heart(s), the liver(s), and a portion of the meat and then by distributing a share to each family in the camp. Only a small amount of liver was

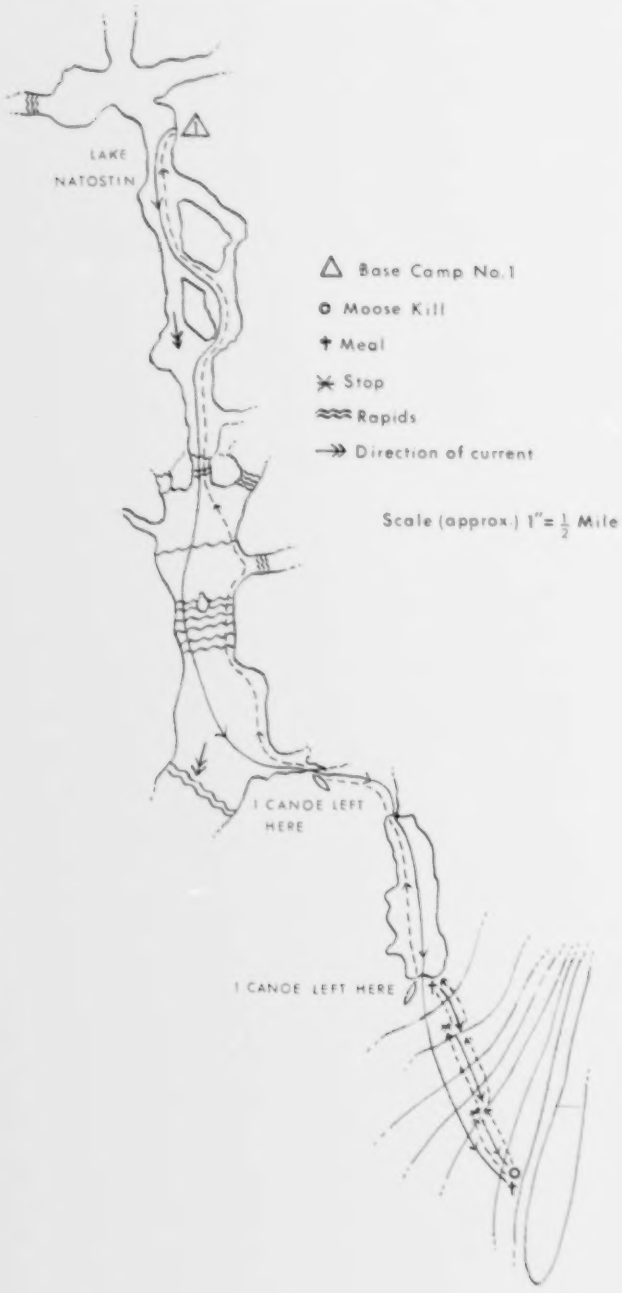
eaten, as it was considered "strong" food. Although moose meat also was considered "strong" food, it was all consumed. When the allocation of the kill had been decided, the successful hunter appointed the time the moose would be retrieved, which could be the following day or, in winter, several days or weeks later. When the return trip was made, the men and boys constituting the party partly cleared the route to the kill of obstacles and brush and made additional blazes. Each man was responsible for butchering his share of the kill.

The carcass was left on the ground while it was skinned and butchered. This work was done with large butcher knives and very occasionally with axes. The hide was removed from one side beginning at the ventral cut, after which this side was partly dismembered. Then the animal was rolled over and the process repeated on the other side. Next the hide was slit about the base of the head. Sometimes the animal was completely skinned before it was dismembered. In either case, the cuts made were the same. After the animal was skinned, the carcass was left lying on the hide for further butchering. The tarsal and carpal joints were severed if this had not been done already, and the metapodial portion of the leg and foot was removed in one piece. The hind legs were removed at the pelvic joints, and the forelegs and scapula were detached in one piece. The head, if not already removed, was freed by cutting between the atlas and axis vertebrae. The sternum was separated by severing the costal cartilage. Some of the meat of the rib cage was left with the sternum. A cut was now made between the first and second ribs and continued between the thorax vertebrae. This segment consisted of the cervical vertebrae, the first thorax vertebra, and the first ribs. The remaining portion of the carcass was now removed from the hide. A cut was made along the backbone on the dorsal side almost to the tail. At the end of the dorsal cut, two diagonal incisions were made, one on either side and in front of the pelvic area. The meat was then freed from the lumbar region but left attached to the last rib on each side. Near the anterior end of the lumbar vertebrae, a short diagonal cut was made from the dorsal line to each side, and the flesh over the backbone was pulled forward. Then the backbone was severed at this point by cutting through from the ventral side. Next, the ribs on either side were detached in one piece from the backbone, which required the use of an axe close to the vertebrae.

When the butchering was completed, the sections of the carcass were packed in bags, if available, or wrapped in pieces of canvas for transport to camp. The forelegs and the hind legs were wrapped separately as single bundles. The livers, lungs, hearts, intestines, and stomachs were wrapped in the hides. The bundles were of a convenient size for portaging, weighting perhaps 100 pounds apiece.

The following, taken directly from the fieldnotes, describes how moose were dismembered and then brought back to camp:

[*Recorded during the day*]
September 29th, 1953 left camp 7:15; got to where the first canoe left at 7:45 (*see* Map 3). Arrived at moose shortly before 10:00. Ate, and about 10:30 started skinning male and female. Alfie had skinned calf while tea was being boiled. By about 11:30 skinning done and be-



Map 3. Sketch map showing retrieval of moose kill

gan packing. By 12:00 this was done. Had tea which had previously been boiled and kept warm by the fire. First washed blood off their hands with snow. 12:10 began portaging. By 3:15 all was down to small lake, and Sam and Will had taken a canoe load to other end of lake. Ate, and by 3:45 took remainder of meat to other end of lake. Got there about 4:00. Portaged everything back over to first canoe by 5:15. Alfie and Charlie made poling sticks and at 5:40 were underway. At 6:45 had poled out of the last rapid. Paddled back to camp getting here at 6:50. The canoes were then unloaded and the meat piled in front of Alfie's tent. First covered with tarps and then spruce boughs which were put in bottom of canoes on way home for meat to rest on. This is to keep it out of the water.

[*Recorded that evening*]

A cold gray morning. Everyone was up shortly after 6:00. 7:15 we were off down the lake. Charlie, Alfie, Coomshish, and I in the eighteen foot paddler canoe, and Sam and Will in a square-end canoe. Ran rapids down to where small stream entered on left side. Here left the square-end canoe. Alfie portaged paddler canoe about half way to stream entering small lake. Charlie took it rest of way. Paddled down small lake. On the way spotted a lone goose. Everyone got as low as possible and paddled to shore out of goose's sight where Charlie and Sam got out with their 30-30's. They walked up opposite goose and fired some five rounds, missing. Alfie and Will paddled canoe to where they were. Then he (Alfie), using .22, took five or six shots at goose. Finally got it. Went on to end of lake where canoe was left. Started walking to the kill carrying food, axes, tumps, and bags. On the way they cleared a semblance of a trail. Cut out or broke over a dead tree here and there. Cut out a few bushes. Moved fallen trees out of way. Blazed a trail for return trip. Cut off small area of tree for blaze. There were large blazes on a few trees indicating route in. Surmised that Alfie blazed these on his way out yesterday. They stayed in the burned areas as much as possible for ease of walking, I gather, as it is more open. Opposite kill went into forest which had not been burned.

The kill had been cut down the ventral side and the insides cleaned out. Legs removed at wrist joint. The moose had not been moved apparently from where it fell. In skinning and cutting up no attempt was made to save the blood. Had our meals here; had moose cooked on spit. Charlie opened his piece up more with short shaved sticks. For at least one spit black spruce was used. Probably rest also as this about only tree in the vicinity. The spits were roughly made but in characteristic pattern with meat end long and tapering and ground end shorter and sharply tapering.

Alfie ate his spitted moose meat with lard as he does his fish and bannock. Everyone had his own spit. Tea and bannock.

The moose had been covered with boughs of spruce and alders.

They first uncovered the cow. Then the bull where they sat around talking for a few minutes. Then went over and uncovered the calf and carried it back to where the cow was. Got a fire started, tea on. Then Alfie and Will dressed out the calf. Then ate. First washed hands in snow. Coomshish wanted to pile the calf's legs with those of the cow's, but his father told him to leave them in separate piles. The legs of each individual were done up together separately. Several whiskey jacks were around and Coomshish tried hitting them with slingshot his mother made for him yesterday. It appeared that the parts of the different moose were not packed together, i.e., only those pieces of the same moose were packed together. This may have been accidental, or faulty observation. Only two trips were necessary to get everything down to the lake. Two stops were made. At each stop everything was brought up and then continued next lap as they do on portages. On last lap took first load, and Sam and Will took what was there by canoe to north end of lake while Charlie and Alfie made two more trips each. Didn't have moose meat when we ate here. The heads were brought out. Most everything was, except for food in paunches and what looked like some part of the intestines. Also the stomach of bull was left. May have been accidental as was under some boughs. I am not too sure of various parts. On last portage to river an extra trip was necessary for canoes. Some of the meat was brought only half way but some all in one trip. At river made poling stick. Alfie had brought a poling iron. Set it part on end of pole by hitting against stone then asking if anyone had a nail to secure it with. No one did, but Charlie found a bolt in his pocket that could be used. Drove this in with axe back.

On the way up to moose everyone was in gay spirits, laughing and talking. Carried their rifles with them. But portaging really settled down to work and moved the meat out fast. Were cheerful enough though. Smoked a good many rolled cigarettes, rolling their own. Don't know why. Alfie had his pipe but apparently no tobacco. He always has had his pipe tobacco with him. Charlie had no pipe but a little leaf tobacco. Sam had the cigarette tobacco. There is probably no significance in this. Everyone turned in about 9:00. But we heard Alfie saying prayers.

Moose meat is on the ground still done up. Most, if not all the dogs have been tied up. Had a job catching several of them.

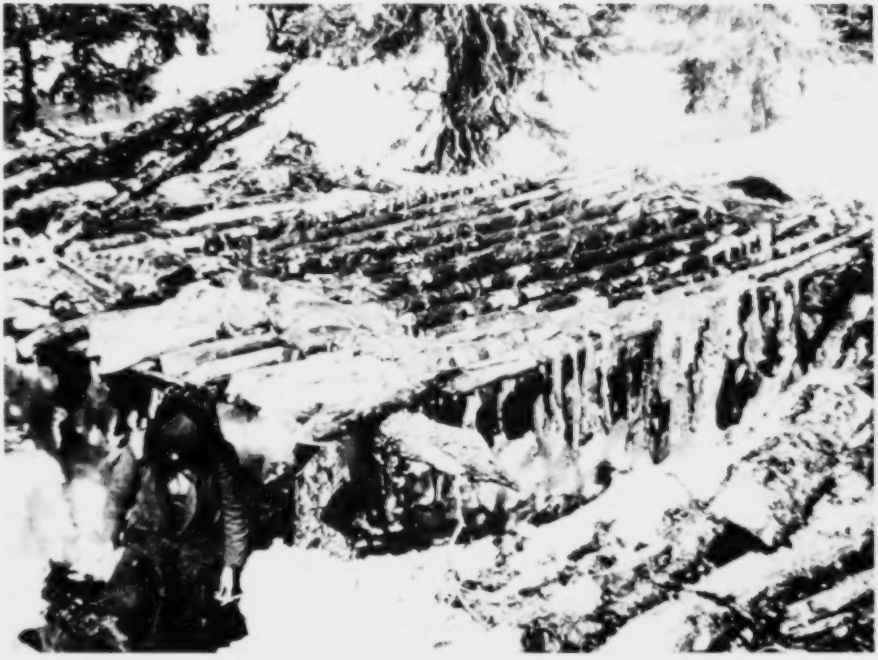


Plate I. Drying rack with meat

No particular care was taken to save the blood. It was not eaten since it was considered too "strong," but occasionally, some was brought to camp and fed to the dogs. The stomach contents were thrown away. Otherwise, everything else, as a rule, was saved for future use.

During the winter, the meat was transported to camp on sleds and/or toboggans. At other times of the year, it was carried with a tumpline to the nearest convenient water system and transported by canoe. During fall and spring, the meat was stored on boughs near the tents. If it was late in the day when the men returned, the meat was covered with tarpaulins and left outside for the night. Needless to say at these times the dogs had to be tied. In winter the meat was taken directly inside the lodges to prevent it from freezing or to thaw it.

Almost all of the moose was utilized in some manner. All meat, except that which was to be consumed within the next few days, was prepared for drying without any salt added. The work was done inside the lodge. The meat was stripped from the bones, each muscle of the legs was left encased in its sheath of connective tissue. These were sometimes dried without further sectioning, if they were to be consumed in the immediate future. They were pierced at one end, a string run through the opening and tied and then they were suspended from a drying rack.

The remainder of the meat and occasionally that from the legs was cut into thin sheets and jerked. These

Plate II. Wrapping dried meat

Plate III. Smoking moose intestines

sheets were hung over the poles of a drying rack. The lumbar-thorax section was cut into three pieces, strings attached, which were hung to dry. The upper and lower leg bones, still attached by the tendon, were hung from the drying rack (*see* Plate I).

A small fire was kept burning under the rack during the day for about four days. If it rained or snowed, the rack was covered with tarpaulins. At the end of this period, the meat was sufficiently cured to keep for several months.

When they were dry, the sheets were laid on a flat stone or block of wood covered with a canvas and pounded with the pole of an axe to break down the tissues. Sometimes the fine particles caught on the canvas were saved to be made into pemmican.

Dried meat was packed in bags or wrapped in canvas bundles (*see* Plate II) and stored on a cache rack. The pieces that had not been cut into sheets were usually left on the drying rack. Occasionally, in winter, some of the meat was left on the bones.

The fat was hung up inside the lodge. The intestines were "smoked" on sticks over an outside fire for a few moments (*see* Plate III).

The metapodial region of the legs and the feet were processed in the following manner. The hide was slit down the rear side of the leg, cut around just above the foot and removed, starting at the proximal end. The metapodial bone was then freed from the foot and scraped. Next, the bone was cracked, and the marrow was removed and was usually eaten immediately. The bone might be used for a flesher or a beamer. The foot was heated either over an open fire or on a stove and the hoof was removed after the hair had been singed from it. The fat from between the toes was then prepared for eating.

The leg hide, when it was to be used for legskin boots, was fleshed, and occasionally the hair was docked.

Usually after the meat had been prepared for drying, the head was

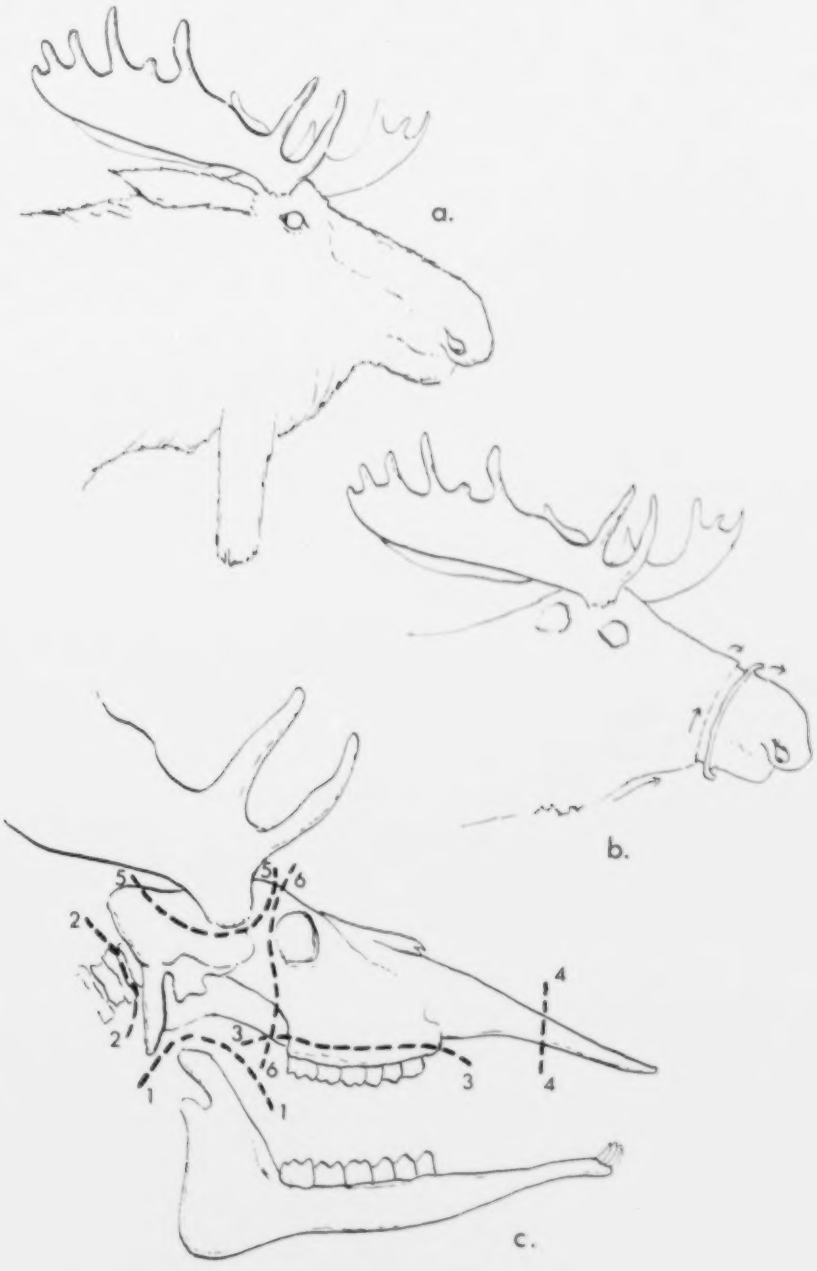


Figure 1. Dismembering moose head

processed (*see* Fig. 1). The skin was slit along the ventral side of the head to within about four inches of the lower lip and around the nose. It was then freed from both sides of the head, one at a time. The hide was cut about the eyes, and the eyeballs were removed. These were never eaten. The ears were removed with the hide (*see* Fig. 1b, p. 23). The lower lip was separated from the skull but left attached on one side to the upper lip. The latter was then removed along with the nasal cartilage. The lower jaw was detached by pulling and cutting it away from the skull (*see* Fig. 1c, p. 23). The tongue and the tissue of the oral cavity were removed so that the meat could be cut from the lower jaw. Next the atlas vertebra was severed from the skull, and the upper teeth on each side chopped out in one piece. Then the forward end of the muzzle was parted from the rest of the skull by chopping through the bridge of the nose and the skull cap was removed in one piece including the antlers if there were any. Following this, a transverse cut was made just behind the eye sockets through the skull to the oral cavity to detach the rest of the muzzle. The brain case—the remaining section—was split in half longitudinally and the brain removed. The pituitary or pineal body was thrown away and the different sections of the skull were hung with the meat to dry.

If the headskin were to be used as a mat, it was fleshed with a butcher knife. Holes were cut along the edges, spaced about 1½ to 2 inches apart, in preparation for lacing the hide to an oval frame. A doubled string was attached to either end of the frame with a lark's-head knot. The hide was then laced to the frame (*see* Fig. 2) starting at the top and proceeding down one side and then the other to the mid-point of each side, where the ends of the string were tied. The process was repeated from the other end of the frame. Finally the strings were tightened to stretch the hide taut. The flesh side of the hide was

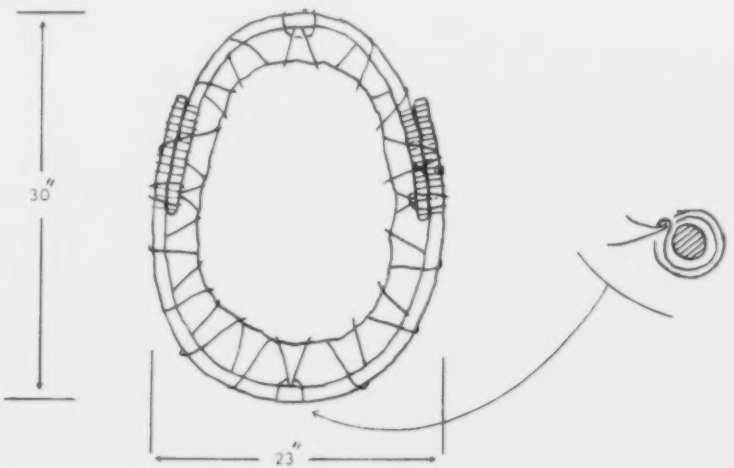


Figure 2. Lacing moose headskin to hoop

rubbed with soap and water, scraped with a knife, tightened, and rubbed with soap and water again. The frame and the hide were then hung outside to dry.

When the scraps of meat remaining on the leg bones had dried, the bones were processed. This generally occurred several days after the meat had been prepared for drying. The remaining flesh was scraped from the leg bones and saved. The bones were then broken with an axe. To do this, a large piece of canvas was laid in a corner on the floor of the lodge. A wooden block was placed at the centre of the canvas. The bones were broken on the block and the pieces were caught on the canvas. The ends of the bones were chopped into small pieces, which were used in making soup. The centre sections of the bones were cracked, and the marrow was extracted and melted down for later use. The bones from the centre sections were not used, except some that were made into beamers and fleshers. The remainder were immediately placed on a special cache rack. Later all the other bones, except those made into tools and the scapulae were similarly disposed of. The scapulae was pierced and hung on the branch of a tree.

Generally, the antlers of moose were placed on a stump near the camp, either soon after the kill had been made or sometimes not until the following spring. They were positioned near the shore, and always placed facing east or southeast, regardless of the direction of the water.

The erection of the antlers was accomplished in the following manner (*see* Fig 3). A living black spruce tree was cut to a stump about five feet high. The stump was split vertically, and a wedge was inserted and driven into the split to widen it. When the split was sufficiently enlarged, a second wedge was driven horizontally into the split at its base, and the first wedge was removed. Near the top of each split portion on the inside surface, horizontal cuts were made with a saw. The wood was removed with an axe from the top of each split portion to the cuts. The antlers, still joined by part of the skull cap, were set in the opening, and the second wedge was removed, which allowed the split to close and clamp the antlers securely in place. Occasionally, other pieces of the skull cap were nailed to the top of the stump on either side.

The processing of a moose hide required many hours of work and a number of steps. When a moose was brought into camp, the hide was spread on the ground flesh side up and washed with water to remove the blood. After this, the centre of the hide was depressed and a little water added to the hollow. The edges were folded over so the hide would remain moist until worked. After the meat had been prepared for drying, the hide was fleshed. A fleshing post was erected, and spruce boughs were spread about the base of the post. The centre of the hide was placed over the top of the post with the flesh side exposed. A cut was made through the subcutaneous tissue from the centre of the hide to one edge and was then extended to the opposite edge so that the tissue was divided approximately in half. If the hide was very large, three cuts were made from the centre to divide it into thirds.

The subcutaneous tissue was removed with a flesher. The worker grasped a fold of the hide with his or her left hand and the bone "chisel" of the flesher with the right hand. The

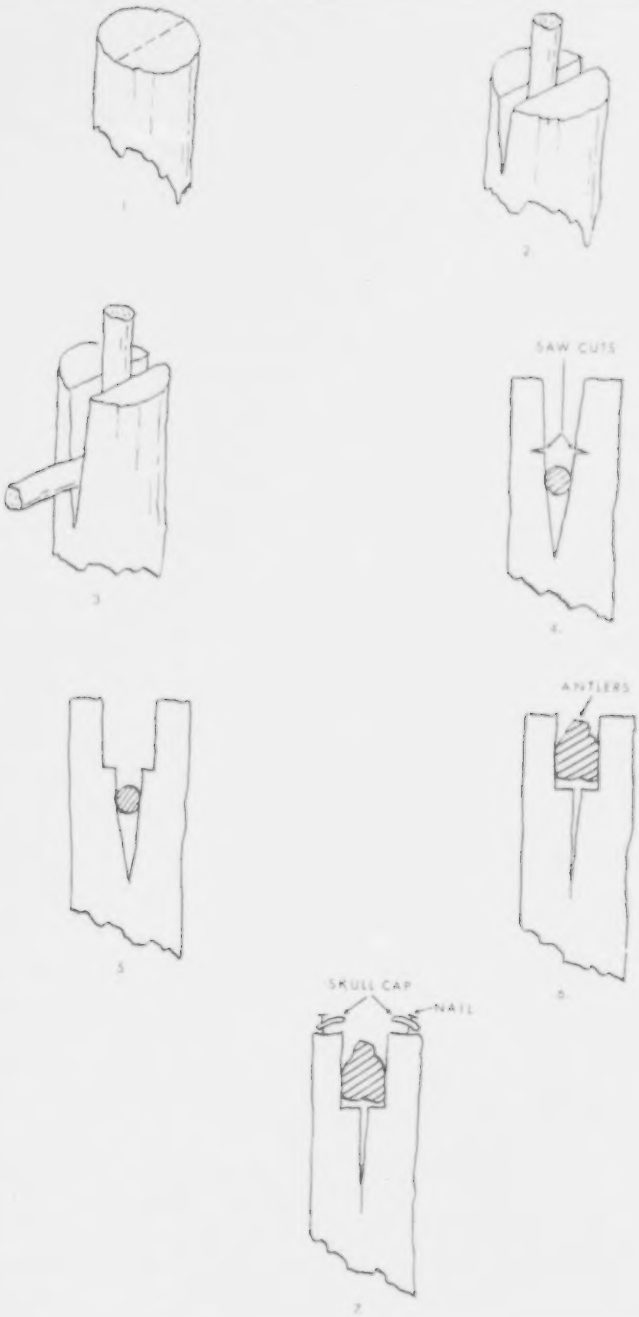


Figure 3. Erection of moose antlers

operator knelt or stood on the boughs before the hide and began fleshing it at the centre. The flesher was brought down with a sharp blow striking the hide just above the operator's left thumb. Each section of tissue was removed in one piece. When the edge of the hide was reached, the tissue was detached, either with the flesher or a knife, stretched over a horizontal pole and scraped clean with a butcher knife. If the hide was to be utilized as a sleeping mat no further processing was done. Otherwise, the processing was continued.

After the hide had been fleshed, it was hung over a vertical pole, usually the fleshing post. The hair was docked close to the hide with a knife except for moose hides secured during the summer since at that time of year the hair was thin. The operator worked from the edge towards the centre of the hide either with or against the grain of the hair. A cutting motion away from the body was used. No particular care was taken with the work and consequently, tufts of hair were left attached. After the hair was docked, the hide was placed in a tub of water. Further treatment consisted of scraping the outside of the hide to remove the epidermal layer and the stubble of hair. To accomplish this, the hide was laid over the length and end of a beaming log. The operator stood facing the end of the log and pressed his or her thigh against it in order to hold the hide in place and to be in position for scraping. The operator then pushed the beamer over the hide along the length of the log removing the epidermal layer in narrow strips. In general, the scraping proceeded from the centre of the hide towards the edge with no consideration given to the direction of the grain.

When the scraping had been completed, the hide was hung over a horizontal pole so that the ends hung down on either side. After the excess water had been wiped off, each side of the hide was rolled to the centre, and the hide was turned over and wiped again. Next the ends of the hide, in which holes had been made, were tied together; an overhand knot was made in each end, one end of the hide was threaded through the slits in the other end, and finally, a stick was pushed through a hole in the inserted end to prevent the ends from separating. The hide then formed a continuous loop about the horizontal pole. A short pole was placed through the loop near the bottom, and the hide was twisted tight, and held to allow the water to drain. As a rule, two people wrung a hide with one on either end of the pole. The hide was then untwisted, its position was shifted slightly, and it was wrung again. After this had been done, the hide was straightened out on the pole and stretched by hand to smooth out the wrinkles. (It might be scraped again with a knife.) Finally, it was allowed to dry thoroughly. The treatment of a moose hide described above was performed at any time of year. The only exception to this procedure was that the hair was not always docked before the hide was scraped.

Certain steps in the process after the initial treatment required below-freezing temperatures and therefore the hides obtained during the summer could not be further treated until the following winter. When it did become cold enough, generally by early December, the prepared parchment-like hide was soaked in warm water for as long as 24 hours. Holes

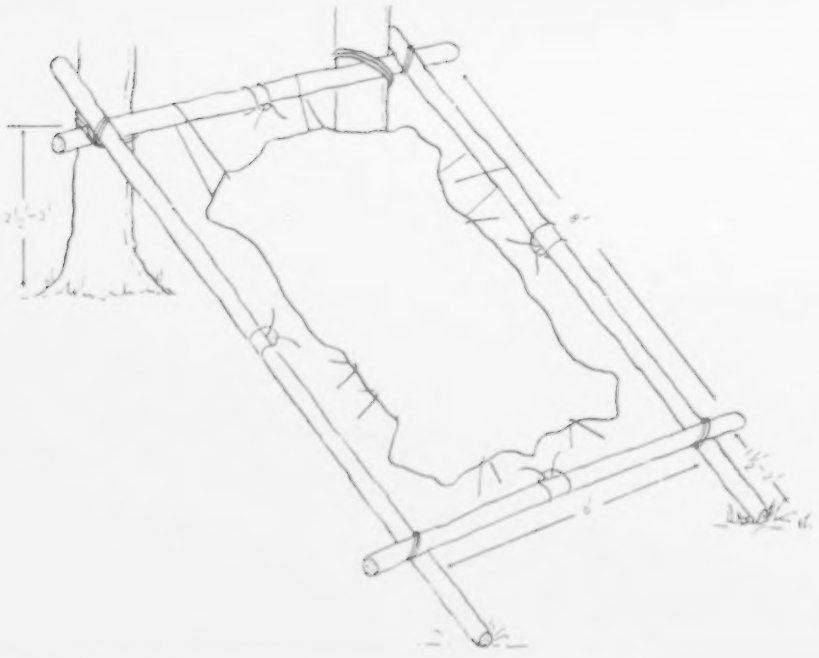


Figure 4. Lacing moose hide to drying frame

were then cut about the edges, and the hide was laced to a rectangular frame, flesh side uppermost (*see* Fig. 4). Doubled strings were attached at the centre of the four sides of the frame by lark's-head knots, and the lacing proceeded from these points in either direction. Several people worked together in order to complete the lacing before the hide froze.

Once the hide had frozen it was scraped. This might be possible to do within an hour if the temperature was very low, if not, the hide was left on the frame overnight. The hide was scraped with an axe head mounted transversely at the end of a long pole. Two people facing each other did the scraping. They each held an end of the long pole which formed the handle of the scraper and pulled the axe head back and forth the length of the hide (*see* Fig. 5). In general, the work proceeded toward the bottom of the frame. Only the flesh side of the hide was scraped. Scraping was repeated as many as three times depending on the original thickness of the hide and its intended use.

When the scraping had been completed the hide was taken inside the lodge and hung overhead to thaw. It was now prepared in one of two ways depending on whether it was to be used for moccasins and mittens or for thong. If for moccasins and mittens, it was soaked in soapy water and then removed and twisted several times, in the same manner as previously described for removing excess water. Following this, it was

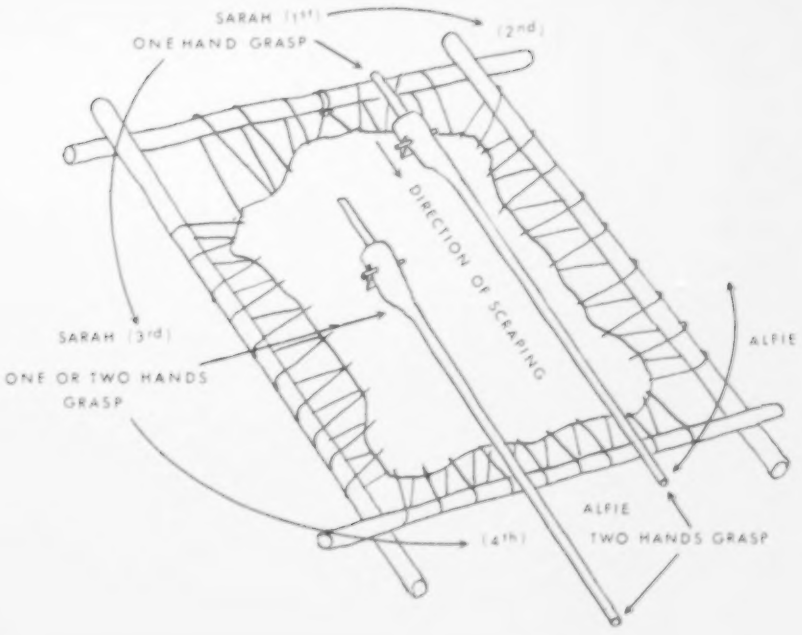


Figure 5. Scraping moose hide

stretched back into shape and scraped lightly with a butcher knife. Next the hide was treated with a mixture of oatmeal and lard or brains and lard. On occasion, both mixtures were used on the same hide. In the first mixture the oatmeal was cooked to produce about two quarts of thin gruel to which was added ½ cup of melted fat and also a little snow to cool the mixture. In the second mixture, the brains were first mixed with fresh snow and then heated. Next, melted fat was added, and then the mixture was allowed to cool. The oatmeal or brains were applied in one of two ways. One method consisted of placing the mixture in a large tub, dipping the hide into the mixture and working it with the hands. In a second method the hide was hung over a horizontal pole and the mixture rubbed in. Both processes took from 15 to 20 minutes.

When the application of the oatmeal or brains was completed, the hide was hung over a horizontal pole placed parallel to a stove about two feet from it. The hide was rearranged from time to time to insure that it was heated evenly and to prevent it from scorching. The first heating took about an hour. Following this, the hide was treated with another application of oatmeal or brains and then hung near the back of the lodge away from the stove. After an hour, this step was repeated. Finally, the hide was taken outside, laced to the frame and left there overnight.

Occasionally during the winter an additional step, "frost-drying," was

undertaken. The hide was removed from the frame and the neck end attached to the end of a long pole. The pole was propped against a tree or cache rack so that the hide swung freely (*see* Plate IV). It was left in this position for at least six days. By the end of this time the hide was usually soft and pliable. It was then brought inside and laid flat across several overhead drying poles for two to four days. It might not, however, be worked again for a week.

When dry, the hide was immersed in soapy water and left overnight. The next day it was hung across a horizontal pole within the lodge and twisted to remove as much water as possible. It was then placed back in warm soapy water. The operator trapped a pocket of air in a section of the hide and forced the air through the skin. This was repeated at various points, the process lasting from five to 10 minutes. It was then placed over the horizontal pole and wrung. The soapy water by now had cooled and, therefore, had to be reheated. After reheating the water, the hide was immersed again. More soap was added and also rubbed into the hide. This washing and wringing process was repeated several times.

When the above had been completed, the hide was hung on a horizontal pole parallel to the stove to dry. About every 30 minutes the hide was removed and stretched, in all, six to eight times. Two people did this work standing on opposite sides of the hide, grasping the edges and pulling away from each other at the same time. In this manner, the hide was stretched along the sides and then across the ends. These two steps were then repeated. Following this, the hide was pulled again, starting at opposite corners and continuing around the hide either clockwise or counter-clockwise. After the initial stretching, the sequence often varied.

Plate IV. Frost-drying moose hide

While hanging by the stove, the hide was occasionally beaten with a stick or crumpled in the hand to break down the tissues. This was usually done with thick hides. As the dressing process neared completion, the skin might be scraped with a semi-lunar knife or the end of a spoon handle. This also helped to break down the tissues. As many as seven hours were needed to dry and stretch a hide. May and June were considered the best time of year for the above processing since the wind and warm sun helped to soften the hides and, accordingly, less manual labour was required.

The hide was now ready to be smoked. This could be done at any time of the year. The hide was first examined to determine whether all areas were equally pliable. If certain spots were stiff, they were swabbed

Plate V. Smoking moose hide

with cod liver oil. Presumably, native fish oil had been used in the past. Next, the hide was washed in soapy water.

During the summer, hides were smoked outside the lodge (*see* Plate V); inside during the winter. The edge of the hide was trimmed to remove the lacing holes. The trimmings were saved. Any holes in the hide were closed by sewing, covered with a piece of paper which was sewn in place, or stopped with a wooden plug. The hide was folded in half along the dorsal line and the edges sewn together. An opening was left at the centre of the ventral line and a canvas tube attached around the opening to form a conduit for the smoke. A string was tied to the hide at either end of the dorsal line and the hide then suspended between two posts or adjoining sides of the lodge. Within the hide and near either end was placed a stick, about 10 inches long, to hold the sides apart.

Dry rotten wood, except for banksian pine which was considered too resinous, was used for smoking. The wood was placed in a pail and ignited. The pail was set under the hide and the canvas tube adjusted about the top. Additional wood was added as needed. The inside of the hide was examined periodically by removing one of the wooden plugs. After one surface was smoked, the hide was taken down, turned inside out, and the process repeated. This completed the preparation and the skin was folded and put away, ready

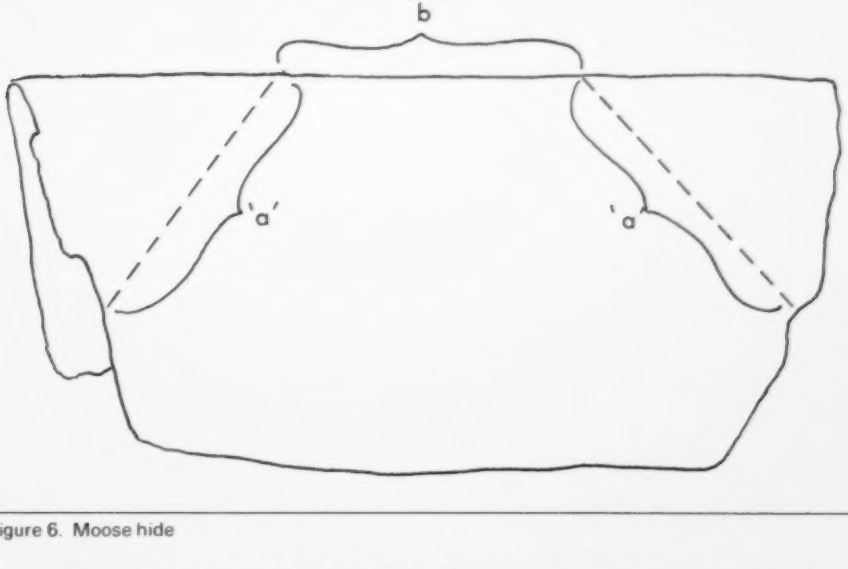


Figure 6. Moose hide

to be made into moccasins and mittens. One moose hide was sufficient for about 12 large pairs of moccasins or 20 small ones and from six to eight pairs of mittens.

If the hide was to be utilized for thong, all phases of the terminal process were dispensed with. As soon as it was frozen and scraped, it was brought inside the lodge and thawed. It was then ready to be cut into thong. Formerly, the hide was cut with a knife. A slit was made at the centre of the hide and a length of thong cut along one edge of the slit. To do this, the edge of the slit at the point where the thong was being separated from the rest of the hide was inserted under the operator's right thumb-nail on the outside. The knife was held in the right hand with the blade against the thumb-nail and thong. In this manner, the width of the thong was held constant. The knife was pulled toward the operator. The cutting was continued spirally around the slit until the edge of the hide was reached. A second person held the thong and the edge of the slit from which the thong was being cut at a constant tension.

In recent years, a special tool (Rogers 1967: 42–43) has been substituted for the knife in cutting thong. Otherwise, the process has apparently remained approximately the same. Some additional details were gathered through direct observation. After the hide was thawed, it was hung over a horizontal pole, with the head at one end and the tail at the other and cut in half along the dorsal line. Next, a lengthwise slit was made at the centre of one half. This was done in the following manner. The half section of hide was folded lengthwise and the corners folded along lines "a." A cut was then made along line "b" between the ends of the folds (*see* Fig. 6). After this, the hide was unfolded. At one end of slit "b," the operator started cutting the thong with a pair of scissors. Only a few inches were cut. Next, the end

of the thong was inserted in a groove of a special tool and a broken piece of razor blade pressed in beside it. To cut the thong, two people sat facing each other. Often they balanced a snowshoe on their knees on which they placed the hide. One person grasped the tool and pulled it toward his or her body. The other person, sitting opposite, held the thong and hide as described previously. As the thong was cut, it was placed in a pan. When the other end of the slit was reached, the hide was turned around and the cutting done along the other side of the slit. This was continued spirally around the inside of the slit until the outer edge of the hide was reached.

The edges which remained were now cut into thong. A strip of thong was first cut along one edge with scissors. Then the special tool was employed, cutting back and forth along the same side until the piece was rendered into thong. A second method of preparing thong from the edge pieces was similar to that for the hide itself. A slit was made in the middle of the piece and then cut as described. Following this, the other half of the hide was prepared.

After the thong was cut, it might be processed for lacing the centre sections of beaver-tail snowshoes. If so, it was taken outside the lodge, unwound and stretched on the snow. When it had become frozen, it was rewound and hung outside to dry and bleach. This might take as long as three weeks. Thong used for lacing swallow-tail snowshoes and the toe and heel sections of beaver-tail snowshoes was not bleached. If the thong was not for immediate use, it was wound loosely about two vertical poles and dried near a stove in winter or outside if weather conditions permitted. All thong used in lacing snowshoes was first tested for strength by stretching it. The thong of one moose hide was sufficient for lacing approximately one to two pairs of snowshoes.

Caribou

Formerly, caribou were probably taken throughout the year whenever the opportunity occurred, although the principal period for hunting was during the early fall and winter. This, at the time of field-work, was still true. The Matoush hunting group killed caribou at the following times: during the week of February 15, the hunters took one caribou; during the week of February 22, two caribou; and during the week of March 8, nine caribou.

Caribou-hunting techniques varied slightly from those employed for moose. Formerly, caribou were captured with stationary snares set either in trails or in a chute and pound, and with bows and arrows. Spearing of caribou was apparently not practised by the Mistassini Indians, although they knew of its occurrence among more northerly groups. In time, guns were introduced for caribou hunting.

Commonly during winter, caribou were tracked. Generally, four or more men conducted a hunt, remaining away from the base camp for as long as a week or two at a time. The tracks of caribou were sought and when found, the animals were trailed. If a man was alone and discovered caribou tracks, he might return to camp so that others could join the hunt.

After caribou were located, there were several ways of securing them depending upon the terrain and the position of the animals. If the animals were in a forest area, the men closed in upon them in an arc and

attempted to surround the herd. If some animals escaped, they were immediately pursued. Hunters ran to either side of the escaped portion of the herd and attempted to get ahead of the animals. This might be repeated several times.

If caribou were located on a frozen lake, the hunters took advantage of the animals' propensity, when startled, to try to escape by staying in the open and not entering the woods. If the animals were near the centre of a lake, the men separated, going to either end of the lake while one stationed himself opposite the herd. After the men had reached their stations, the hunter opposite the caribou opened fire. Those that escaped the first onslaught ran toward either end of the lake where the hunters were waiting in ambush.

If the herd was seen at one end of a lake, the hunters sometimes erected a fence in the snow near the middle of the lake. It was placed at right angles to the shore and extended part way from one bank toward a point of land on the opposite bank. The fence consisted of widely spaced spruce saplings. Several men concealed themselves on the point of land opposite the end of the fence. Another hunter went to the end of the lake and fired into the herd. The animals that he missed generally fled down the lake. Because of the fence, they were forced to pass near the point of land on which the other hunters were concealed. Often, however, the caribou raised so much snow that they were partially hidden from view, making it difficult for the hunters to aim accurately.

The following field-notes describe two actual caribou hunts carried out by the Matoush hunting group, one in 1954 and one several years earlier:

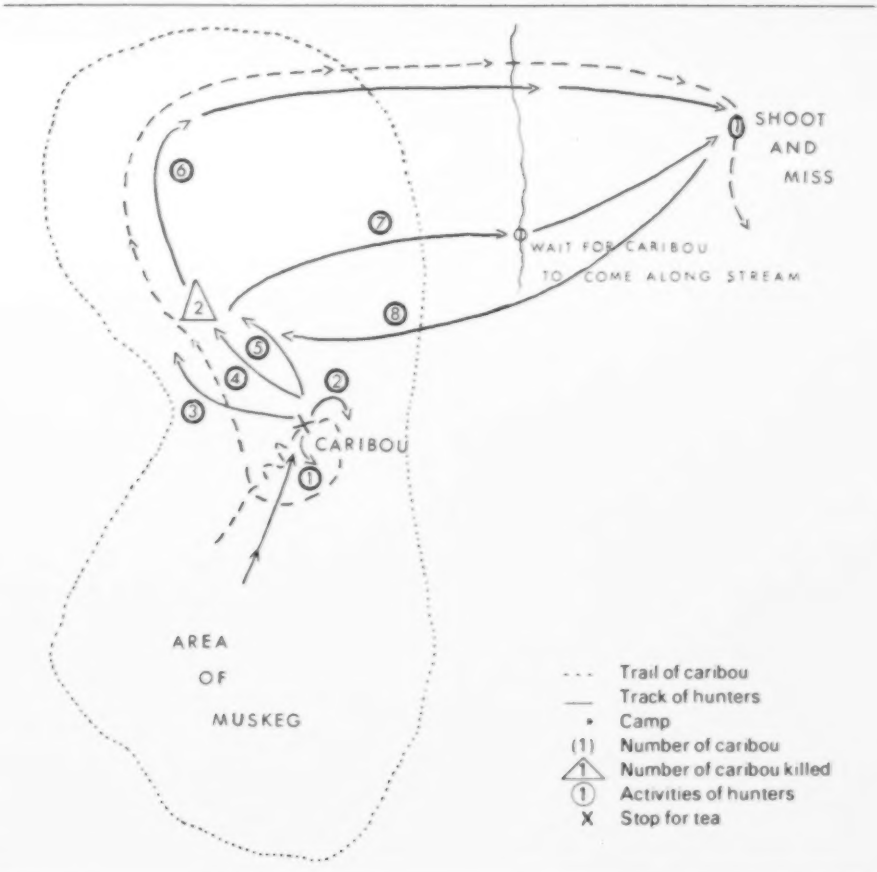
Alfie, Sam, Will and Charlie walking along and then stop for tea (*see* Map 4). Spotted caribou and (1) Alfie and Charlie move out in one direction and (2) Sam and Will in the other direction. Caribou flee (3) Alfie and Charlie pursue here, (4) Will here and (5) Sam here. Killed two caribou and then (6) Alfie continues pursuit as does (7) Sam (8) Alfie and Sam return to kill.

The second caribou hunt as described by an informant (*see* Map 5):

(1) Sam, Charlie and Jimmy were working along here five years ago. Must have been in the latter part of January and apparently had their main camp at Nipisci. Here Sam's father Will, young Sarah and Louise were. (2) Jimmy turned, saw the four caribou to his left, which rapidly took off. They saw many caribou at other end of lake. (3) Here split-up. Charlie and Jimmy went to the island (6) and gathered small spruce trees and then went out and set them up. Sam said set up two, but drew in three stakes (7) at other side of lake. These were black spruce set upright in the snow or ice to represent men. The caribou would shy away from them and pass close to where Charlie and Jimmy were waiting (6). Sam worked his way down to lower end of lake (4) occasionally approaching the lake for a look. When arrived (4) started shooting into the herd of caribou. Got four, one of which got to shore on his right before dying. Four caribou took off in wrong direction of plan and Sam took after them. Was able to shoot one more (5). The rest of the herd took off up the lake past the island. Charlie and Jimmy missed. Sam said caribou were moving fast—almost like a plane and the snow was swirling about.

After caribou passed island they got split. Jimmy took off after a part (8). It was almost dark now. Followed for a ways, but with no luck and returned to the tent (10) getting there at one in the morning. Charlie took off after other bunch (9). Eight caribou in this bunch. Didn't overtake them and he was first to get back to camp. Gathered Sam got in about midnight. Said he was using 30-30 and said he fired some 20 rounds. Shoulder was sore.

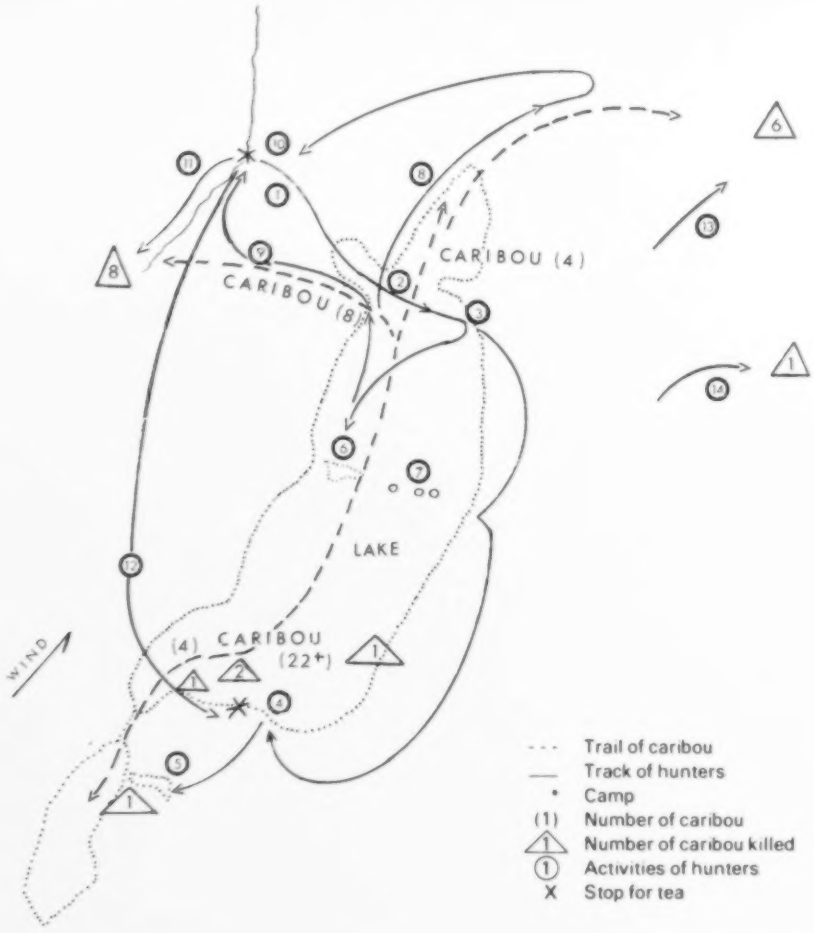
The next day Charlie went after the eight caribou (11), met up with them and shot them all. Sam and Jimmy moved tent (12) down where Sam had got four caribou. After this, whether the same day or the next day (don't know), he and Jimmy went after others (13). Met up with them and got six, (Sam two and Jimmy four). Then Jimmy got one more (14). This makes a total of 20 but Sam says they got 27.



Map 4. Caribou hunting (1)

If a number of caribou were killed far from base camp, the carcasses were buried in the snow and the men returned to camp. Base camp was then moved to an appropriate site within a few miles of the kill in order to save the labour of transporting the meat. After the animals were killed, they were butchered. This was done in substantially the same manner as with moose. There were, however, some variations. For instance when the animal was skinned, the hide was removed from the back of the neck far enough forward so that the ears were left attached to the hide. At the same time the back of the lower jaw was skinned. Furthermore, the very tip of the tail was left attached to the end of the tailbone. Finally the blood was saved, being placed in the stomachs (first only?) with their contents.

If the meat was buried after being butchered, an excavation from three to four feet deep was first made in the snow. Sections of the carcass were then piled at the bottom of the



Map 5. Caribou hunting (2)

pit and the hides laid over the meat with the outside surface uppermost. The head and metapodial sections with feet attached were placed on top of the hide. Then, the meat, hide, and head were covered with snow. The meat was buried to preserve it. It was said that it would remain fresh for as long as a month. Furthermore, the covering of snow prevented it from freezing too rapidly. When this happened, further butchering was delayed until the meat could be thawed.

When the men transported the meat to camp, they used sleds and toboggans. The caribou head was placed at the front of the toboggan facing forward. The hides (or canvas sheets) were spread on the beds of

the sleds and toboggans and the meat placed on them. The sides of the hides were wrapped about the meat and then everything was lashed to the conveyance.

The meat was processed in the same way as moose meat. During the winter, it was hung overhead inside the lodge and dried. The *inlmicUwhap* (a form of communal lodge) was considered the proper structure for this purpose; the dome-shaped lodge and canvas tents were thought inferior. During the drying, the meat was several times removed and pounded. All powdered meat resulting from the process was saved. After being pounded, the sheets were impaled on a thin pole and suspended overhead from supports within the lodge. Drying took approximately six days. The meat was then packed and stored (in former years, it was wrapped for storing in the subcutaneous tissue taken from caribou hides).

Some of the fresh meat was cut into small pieces and stuffed into the intestines after they had been cleaned. Meat for this purpose was generally taken from the back and removed in strips attached to the sinews. It was then scraped and cut from the sinew. The latter was placed in water for further treatment. Lard, a little flour, salt and pepper were added to the scraps of meat and all mixed thoroughly. After the mixture had been stuffed into the intestine, it was ready for cooking.

The blood and the stomach contents were mixed and then placed in the stomach. The opening was securely tied and the stomach hung to dry. Blood alone might also be dried in flat pans. The metapodial region of the legs was treated in the same general manner as that of moose. The hair was docked about the hooves and then the segment was heated, broken with the back of an axe, and the outer covering removed. Following this the foot was placed on the end of a spit and singed in a fire. Finally, a cut was made between the toes to expose the fat.

The head of caribou was skinned and sectioned in substantially the same way as a moose head. One exception was that the muzzle was removed in one piece instead of two as with moose.

Caribou hides were processed in the same manner as moose hides except for minor variations (*see* Plates VI, VII and VIII). One substantial difference was that a few caribou hides were ceremonially treated before being smoked but moose hides were not (Rogers 1967: 31–32).

Formerly, when the subcutaneous tissue was used for wrapping dried meat, it was removed from the hide in one piece. A cut was made in the tissue across the neck and the hide was then fleshed starting at this line. At the time of field-work, the tissue was removed and fed to the dogs as was tissue from moose hides.

Although caribou hides were scraped, they were thinner than moose hides and therefore not scraped as many times.

In fact, small hides were sometimes not scraped at all. When the hide was pulled and dried, the operator smoothed the edges with his fingers after each operation. In the past, the operator often used his teeth for this purpose. Before the hide was completely dry, any holes in it were closed by sewing. After the hide was dried and pulled, it was scraped on the flesh side with a semi-lunar knife.

Plate VI. Processing caribou hide (1)

Plate VII. Processing caribou hide (2)

Caribou antlers were disposed of in a manner similar to that for moose. Normally, the hunter kept them until the following spring when he placed them near the late spring camp. Occasionally, they were erected near the site where the animal was killed. Before being erected, coloured cloth was tied about the base of the antlers and then a frame was constructed by securing a pole horizontally to the top of two stumps, four to six feet high. The antlers were placed on top of the pole and at right angles to it. A stick was laid across the tops of the skull caps and tied at either end of the horizontal pole in order to secure the skull caps and antlers in place. The antlers were placed in such a way as to face east to southeast. Occasionally, a single pair was erected in the same way as moose antlers.

All of the caribou was utilized, with the exception of the eyes and intestinal contents. The contents of the stomach (first?), and foetuses were considered delicacies. The bones, after being stripped of meat, were boiled to produce a soup. After this had been done, they were deposited on a cache rack prepared especially for this purpose. The scapulae of caribou were hung in trees.

Bear

Bear might be killed the year around. Only one bear was secured by a hunter of the Matoush group and that was during the week of October 5, while the fall hunt was in progress.

Formerly, during the summer, snares were erected in bear paths along the shores of lakes and streams.

Plate VIII. Processing caribou hide (3)

With the advent of fall, deadfalls and steel traps were set in trails around blueberry patches. In late fall, when bears were searching for a place to hibernate, they were tracked. Also during the winter, a search was sometimes made for the dens of hibernating bear. A clue to their location was furnished by the scarred trees from which the bear had gathered bedding. In the spring, deadfalls and steel traps were set at those locations along a stream where bear were in the habit of coming to fish.

At the time of field-work, bear were generally killed with a .30-calibre rifle. As was the case in former times, they were tracked just prior to hibernation, their dens were located in winter and they were sought near blueberry patches during the fall.

During the Fall Hunt of 1953 attempts were made to secure a bear. The following notes describe one such hunt undertaken by two men of the Matoush hunting group (*see* Map 6):

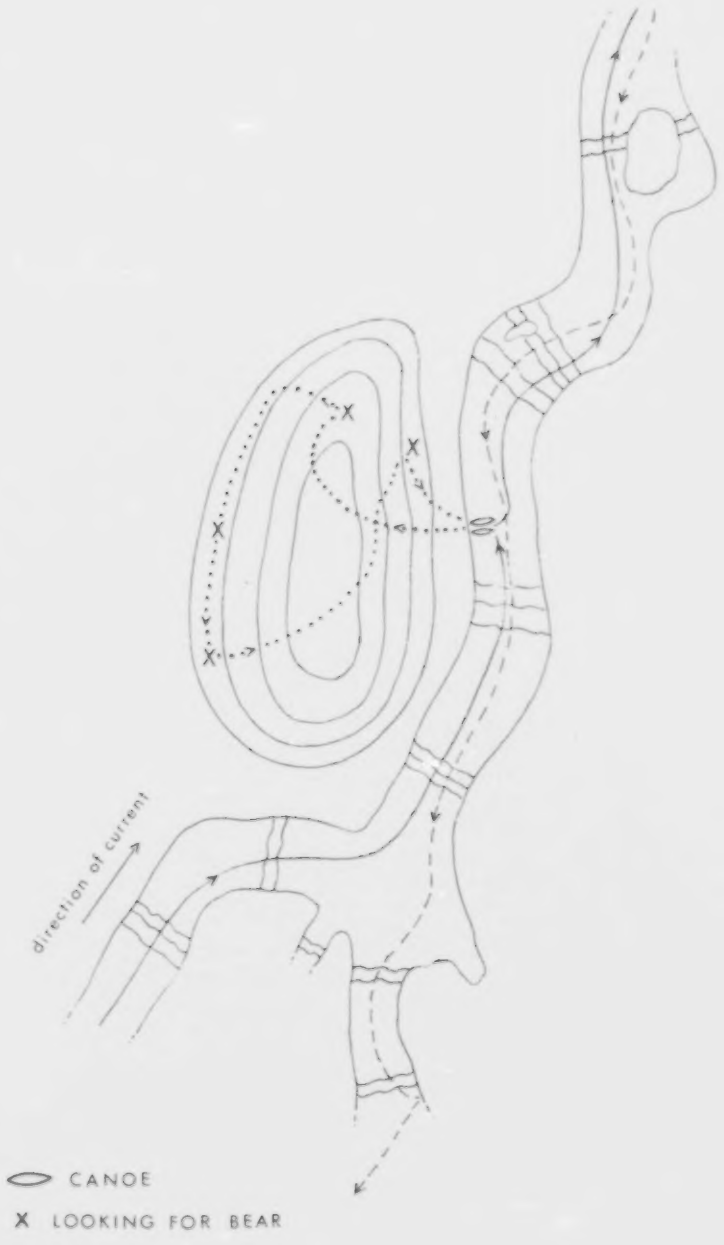
> Alfie is now up in a tree which is dead, looking around. Charlie is 100 yards away, on a large rock, looking also.
>
> Gather from Alfie that the bear is somewhere around but that they cannot see it. Charlie has now come over and climbed the tree where Alfie was. Alfie now sitting down having a smoke.
>
> They are on a small hill quite near the top. The area is burnt nearly as far as can see. Perhaps several miles or more in every direction.
>
> Alfie quite often points with knuckle of index finger. Charlie often uses lips, especially when he is working with his hands.
>
> Are now talking together in low tones. Now leaving the spot.
>
> Charlie just showed me an old chewed branch. Leaves were dead and said porcupine had done it.
>
> Got back to the canoe at 11:45 a.m.

Once a hibernating bear was located, the hunter sometimes spoke to the animal before killing it. He asked the bear not to be angry. After the bear had been killed, it was occasionally given a little tobacco and spoken to again. One informant claimed that this performance made the bear lighter and therefore easier to transport to camp.

After the bear was killed, two slits were made along the ventral line. One extended from the sternum toward the rear for about eight inches. The second extended for about an inch from the sternum toward the head. The stomach, small intestine, and some fat were removed and the slits closed securely by sewing. This was all that was done at the time of the killing. Further dressing had to be performed inside the lodge.

During the winter, bear were transported to camp on toboggans. If it was necessary to return to camp for one, the animal was first buried in the snow and covered with branches. During the summer, a tumpline or canoe was used. When a tumpline was employed, the ends were tied to the bear's hind feet and one end of the *nimapan* or "ceremonial carrying string" was attached to a hole cut in the bear's upper lip. The bear was carried on the hunter's back. The hind feet were at either side of the hunter, the forefeet on his shoulders, one on either side of his neck and the head pulled forward with the *nimapan* over the hunter's right shoulder. When a canoe was used, the bear was laid on its back with the head toward the bow.

On reaching camp, the hunter carried the bear to the tent door and here laid it on the ground. Everyone present helped carry the animal inside the tent. It was placed on its back on the floor at the rear of the lodge with the head pointing toward the rear wall (or perhaps the carcass



Map 6 Bear hunt

must point toward the west?). Then the tumpline and *nimapan* were removed.

The bear was skinned and butchered inside the lodge. The men did the dressing but on occasion were advised and aided by the women. If an adolescent boy had killed the bear, he dressed it while his father watched to ensure that he was doing it correctly. For skinning, knives were used.

The first task in dressing the bear was to remove the strings securing the slits. Next, the posterior slit was extended to the base of the tail and to the anterior slit. The latter was then continued to within about four inches of the tip of the chin. A cut was made from the ventral slit along the inside of each leg to the feet and the hide then cut around the ankle and wrist joints. Following this, the hide was cut completely about the muzzle starting at the end of the ventral slit. The hide from the chin was left attached to the head skin on one side. The skin about the nostrils and over the bridge of the nose was left attached to the skull. Next, the skin was peeled from each side of the carcass to the dorsal line. The ears and the tail were removed with the hide. The hide was now folded and placed to one side.

The carcass was laid on a strip of old canoe canvas. The fat from the region of the clavicals and crotch was peeled toward the stomach. The sternum was freed from the rib cage by cutting through the costal cartilage. The fat and sternum, along with the stomach fat, were removed in one piece. As soon as the body cavity was exposed, the liver was removed. The heart was squeezed to extract the blood and the blood in the lung cavity scooped out and saved. Next, the fat was stripped from both sides and the hind legs severed at the pelvic joint. The trachea, lungs and tongue were then removed in one piece. The fat from the neck to the tail was freed, folded and wrapped in a piece of old canoe canvas. Following this, the head was severed from the body. A cut was made between the atlas vertebra and the skull. After the head was removed, the hunter drew a black line on the bear's skull from eye to eye. This was done with a piece of charcoal taken from the fire and dampened. Then, the meat from the rib cage and along the sides was removed from each side of the carcass. A cut was made between the first and second ribs and first and second thorax vertebrae to remove the neck. The pelvic unit was removed by cutting between the last two lumbar vertebrae. The ribs were severed near their dorsal ends. Some sections of the dismembered carcass were now cut in small pieces. The pelvic girdle was cut through from the ventral side and the two side bones (innominate?) removed from the sacrum. The lumbar and thorax vertebrae were separated into quarters. The forelegs were removed from the scapulae and severed between the humerus and the radius and ulna. The meat was stripped from the humerus. The hind feet were severed at the ankle joint and the meat removed from the femur, tibia and fibulae. These bones were then separated at the knee joint.

After butchering, the meat was stored inside the lodge, piled against the rear wall to await further processing. In the case observed, the back fat was placed in the left-hand corner. Then came the feet, the meat, bones, and finally, the remainder of

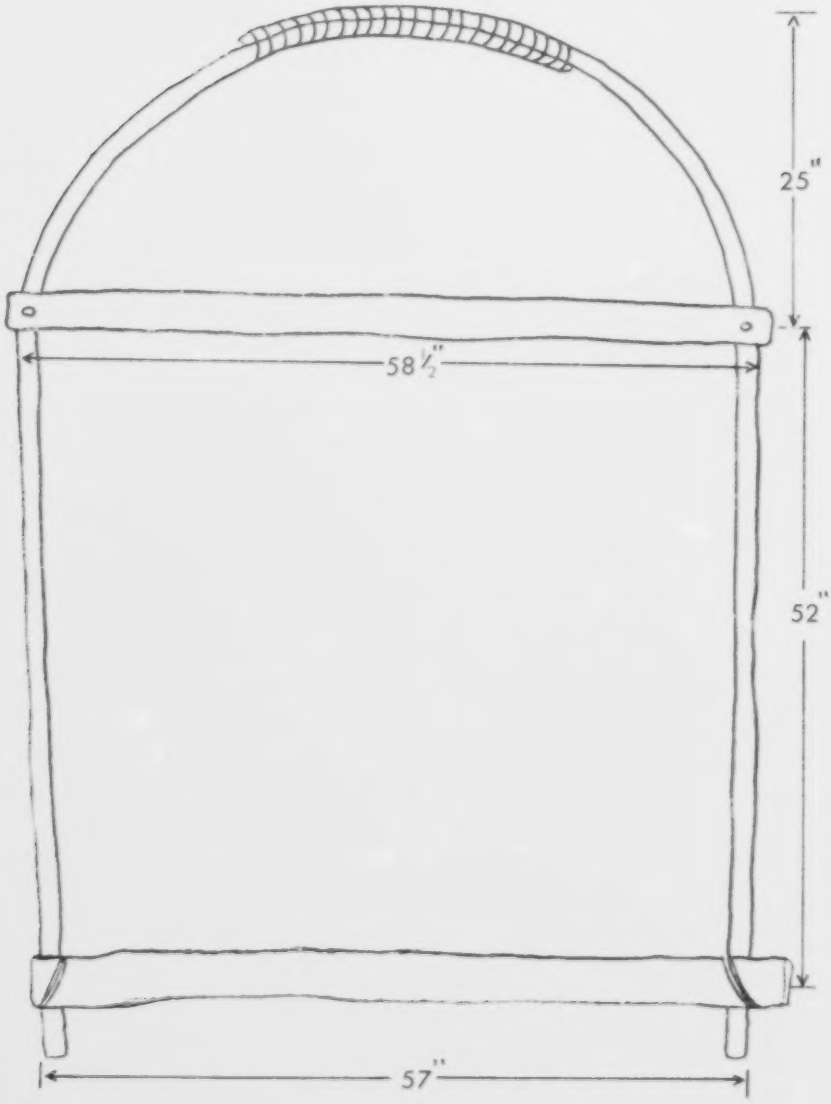


Figure 7. Bear-hide stretcher

the rat. Pans containing the blood, liver, stomach, intestines, lungs, trachea and tongue were arranged on top of the pile. The large intestine was hung over a pole. Later the meat was dried for approximately one day on a moose-drying rack. According to informants, this was always done before it was cooked and eaten.

At the time the fat was rendered,

the women were preparing the hide. They scraped it with a knife to remove any adhering meat and fat, then laced it to a frame stretcher to dry (*see* Fig. 7). It was left on the stretcher from two to three days. Following this, the hide was ready for use as a sleeping mat but was generally not used for a year, presumably, in reverence to the bear.

Bear skins were used occasionally for moccasins and, according to one informant, for "coats." The hide was fleshed with a knife rather than the bone flesher used for moose and caribou hides. The hair might or might not be removed. In the latter case, it was then treated in the same manner as a moose hide which was to be smoked.

The chin skin was made into a charm by one of the women of the hunting group for the hunter who had killed the bear. First, the skin was scraped and then laced to a small stretcher. After the skin was dry, it was removed from the stretcher by cutting the lacings. Next, it was trimmed roughly to a diamond-shape. The sides of one half were slightly longer than those of the other half. The long sides were decorated with coloured bias binding and embroidery thread. Tassels were affixed to all points of the diamond and a loop at the juncture of the two long sides. This represented the nose of the bear; the tassel, at the point opposite, the tail. A strip of cloth was sewn along the long axis of the skin. The *lingual frenulum,* which the hunter had kept since dressing the bear, was given to the woman who was preparing the chin skin. This she placed on the strip of cloth. The cloth was then folded lengthwise and the edges sewn together. The decorated chin skin was then presented to the hunter.

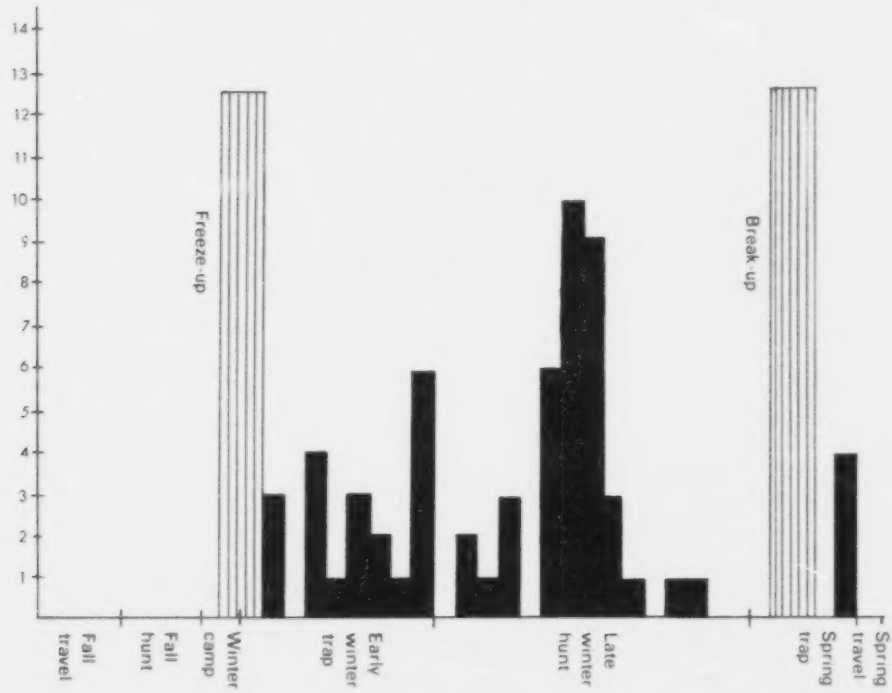
The claws were removed from the bear and fitted into circles of four each. These were hung inside the lodge. The significance of this is not known.

Most of the bones were placed on a cache rack with other animal bones. Skulls were saved and attached to a tree. This was done in late spring just before the hunting group returned to the summer encampment. Skulls were generally erected so as to face east on black spruce trees. One informant stated that they were also placed on birch and larch trees. The same informant said that sometimes red designs were painted on the skull. A stick was placed under the zygomatic arch of the skull and secured to the trunk of the tree. The radius, ulnae, carpus, metacarpus and phalanges were wrapped in birch bark and the package then tied to the trunk of a tree.

Most of the bear was utilized, although little of the liver, which was considered "strong" food, and none of the intestinal contents were eaten. Furthermore, women were prohibited from eating the head, forepaws and lower forelegs.

Beaver

Beaver were generally taken from November to March and a few as late as the latter part of May (*see* Graph 1). Formerly beaver were taken with bows and arrows and deadfalls. Occasionally hunters broke into a beaver "house" and removed the animals by hand. They grasped the tail or one or both rear legs, turned the animal over so that it could not clutch a branch with its teeth and forelegs, and then pulled it out. The animals were killed with



Graph 1. Number of beavers taken weekly

a blow at the base of the skull. Another method of capturing beaver consisted of using small hunting dogs to locate beaver burrows along the shore (*see* Plate IX). A hole was dug through the snow and ice above the entrance. If the water moved at the opening of the burrow, a beaver was inside. Sticks were quickly erected in an arc in front of the entrance to prevent the beaver from escaping. At the other end of the burrow, the hunter began to dig in order to frighten the beaver and force it toward the entrance. When the beaver emerged, it was caught by hand and killed. Nets were also used on occasion. Recently however, beaver have been shot or taken with steel traps. The methods of setting traps have been illustrated elsewhere (Rogers 1967: 80–81).

When the beaver was removed from the trap during the winter, it was swung back and forth in the snow to remove excess water in the pelt. A small stick, sharpened at one end, was thrust through the beaver's nostrils. Occasionally, if the men were not returning to base camp for

several days, the intestines and scent glands were removed. This was accomplished by making a slit along the ventral line near the base of the tail and again along the centre of the belly. More rarely, the beaver was completely dressed.

When the snow was of the proper consistency and no toboggan or sled was available, beaver were dragged to camp on their backs. The loop in the end of a *nimapan* was slipped over the upper incisors and under the stick thrust through the beaver's nostrils.

Beaver were usually dressed immediately after the hunter returned to base camp. If the animal was frozen, it was first hung inside the lodge to thaw. The hide was then slit completely about the wrists, ankles and base of the tail. A slit was then made from the base of the tail to the lower lip along the ventral line. Next, the hide was removed from the carcass with a bone skinning tool and a knife. The skinning tool was used to separate the hide from the subdermal fat. The operator held the freed pelt in his or her left hand and the tool in the right hand. Either the tool was brought down sharply striking the junction between the hide and fat or it was forced between the skin and fat separating the two. Where the hide was in contact with flesh, it was freed with a knife. The hide was cut about the eyes and nostrils and the carcass skinned one side at a time. After the pelt was removed, it was scraped with a butcher knife to remove the blood and then folded along the dorsal line with the fur on the outside and set aside.

There were two ways of dressing the carcass of the beaver. If it was a large animal, a strip of flesh was first removed from the ventral side of the neck. The carcass was then placed on the ventral side. A cut was made along the dorsal line from between the scapulae to the base of the tail. Additional cuts were made to either side of the neck from the end of the dorsal cut located between the scapulae. The flesh on one side was removed from the rib cage and with it the scapulae and foreleg. The cutting continued toward the rear, peeling the meat from the backbone and eventually severing the hind leg at the pelvis. This was repeated on the opposite side. When this had been done, the sternum was freed by cutting through the costal cartilage. This section consisted of forelegs and scapulae, sides, hind legs and sternum. The hind feet were then severed at the ankle joint and occasionally the forelegs removed. The section which remained, consisting of the backbone and head, was broken at several points although not divided into separate pieces. After the beaver

Plate IX. Hunting dog

was dressed, the two sections were hung over a horizontal pole at the rear of the lodge.

During the process of dressing, the blood from the body cavity was ladled into a pan and saved. The intestines and stomach were cleaned and saved for food, as were the liver, minus the gall bladder, the heart and lungs.

Small beaver were dressed in only one section. After the animal was skinned, the tail was removed. Following this, slits were cut in the rear paws. Next, the stomach cavity was opened and the contents removed. The cavity was then closed with wooden skewers. A cord was tied about the base of the tail and the end passed through the slits in the rear paws. Cuts were now made on either side of the carcass over the rib cage and the forepaws inserted in them. If the carcass was to be roasted, it was smeared with the animal's blood.

Occasionally, young beaver were cut into sections for boiling. First, the joints were severed, then the sternum was removed by cutting through the costal cartilage. The forelegs were left attached by a strip of flesh across the chest. Legs, removed in this manner, were cooked on a spit. The head was detached from the spinal column.

If the meat was not to be consumed immediately, it was dried for about a week. During the winter, beaver meat was occasionally frozen.

The tail was prepared for cooking in the following manner: a spit was inserted at its base and the tail held for a few minutes over a fire. After this the scales were peeled off. Another method was to place the tail in hot water for a few minutes and then remove the scales.

After the carcass was dressed, the hide was processed. The flesh side was scraped with a knife starting at the anterior and progressing to the posterior to remove any flesh or fat. The scrapings were saved. Next, the cartilage was removed from the ears. Following this, a narrow strip of hide, which would not be strong enough to hold the lacings when the hide was placed on a stretcher, was cut from both the anterior and posterior edges of the pelt. Next, the ear and leg holes were closed by sewing. A running stitch was made around the side of the ear aperture and then gathered, closing the opening as with a drawstring. A different stitch was employed for the leg openings. Two sides of the hole were brought together, the excess hide removed and then the edges sewn together. All the sewing was accomplished on the flesh side. The needle did not pass completely through the hide but was forced just under the surface.

The hide was laced to an oval frame, similar to that used for stretching and drying moose head skins. The frame was leaned against the side of the lodge so that the head section was uppermost and the flesh side faced the operator. The lacing process was similar to that for moose head skins, except that no holes were cut in the edge of the pelt. Instead, the lacing string was carried on a large needle which was forced through the hide.

After the hide was laced to the frame, hot water was rubbed on the flesh side. The hide was then scraped lightly with a butcher knife. The pelt and frame were now left outside the lodge to freeze. When the hide had frozen, it was again scraped, this time with an axe head or a semi-lunar knife. The frame was inclined

against some object with the head at the top and was scraped from the anterior to the posterior ends. The operator held the axe head in both hands with the blade perpendicular to the hide and at right angles to the direction of motion.

After the hide was scraped, it was brought inside the lodge and the flesh side washed with warm soapy water. When the lacings had been tightened, the flesh side was scraped again with a butcher knife, axe head or semi-lunar knife. Soap was rubbed on the flesh side several times before the hide was taken back outside to freeze. Later it was scraped again.

The hide, when not being worked indoors, was left hanging outside the lodge, the flesh side turned away from the direct rays of the sun. Pelts were left on the frames from a week to ten days. At the end of this time, they were brought inside the lodge and thawed. The hides were then removed from the frames and rolled up from either end with the flesh side out. Each roll was tied with a piece of coloured cloth or canvas and stored in a bag.

Beaver bones were deposited on a cache rack with other animal bones. The skulls, and occasionally the tail bones, were hung inside the lodge for a short time but they too were eventually placed on the cache. If a dog obtained a beaver bone, it was immediately taken away from him. When beaver were eaten away from the base camp, where there were no cache racks and no dogs, the bones were thrown on the ground or in the water.

Otter

At the time of field-work, otter were sought primarily during the winter and spring although they were occasionally taken at other times of the year (*see* Table 2). They were captured in steel traps and nets and were shot. Formerly, otter had been captured in deadfalls, with bows and arrows and, presumably, nets. Sometimes they were forced from under the ice of a small stream by damming it. The animal emerged as the water rose and was then killed.

Otter were not gutted before being brought to camp. If the snow was of the proper consistency and the hunter had no toboggan or sled, the otter were dragged to camp on their back. A small hole was made in one cheek and the end of a *nimapan* attached through it.

On returning to camp, the hunter or his wife skinned the animal in such a way as to produce a cased pelt. To do this, a slit was made from the base of the pad on one hind foot, down the inside of the leg, across the crotch, passing at the back of the anal orifice and down the inside of the other hind leg to the edge of the foot pad. A slit was then made along the ventral line from the previous slit almost to the tip of the tail. The hide was removed from around the tail, legs and tops of the feet with a sharp knife. The hide at the very tip of the tail was left attached to the carcass. Next, for easier manipulation the carcass was hung in front of the operator in the following manner: a slit was made at the centre of each hind foot and a doubled string inserted and secured with a lark's-head knot or an overhand knot tied twice. The otter was then suspended from a pole near the roof of the lodge. The string was attached to the pole by an overhand knot tied twice.

Sometimes the muzzle was now

Table 2 Numbers of game taken weekly

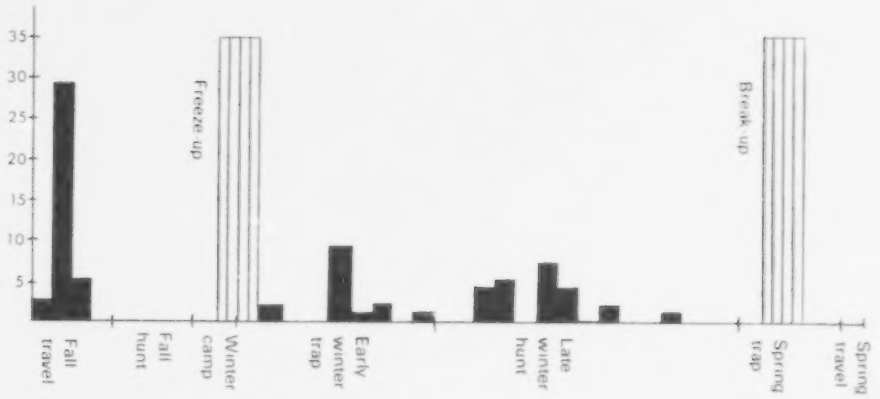
	Fish	Moose	Caribou	Bear	Beaver	Hare	Muskrat	Porcupine	Squirrel	Marten	Otter	Weasel	Fox	Mink	Loon	Geese	Ducks	Grouse	Tern	Owl
Fall travel	46					2									2		14		1	
	69					29			2								1	1		
	43					5					1						10	1		
	149						5		2								3			2
Fall hunt	103						8								1					
	5	3														1		1		
	84			1			14													
	30	1					1	1									7	2		
Winter camp	6								1				1					20		
	116													1			1	1		
Early winter trap		1			3	2			6		2	7 11	1	4 9			2	5 46		1
									2			1		1				16		
	58				4		4	2	3		2	8	2	20				46		
	24				1	9	3		2		1	9		8				49		
	21				3	1	1					10		7				23		
	18				2	2	1					37+		17+				28		
					1							8						38		
	30				6	1			3			11		10				20		
Late winter hunt	25											4						25		
					2				1			2		9				39		
	107				1	4						18		5				11		
	100				3	5			1	1	2	18		5				8		
	44		1						1											
	192				6	7			1	1		24	1	7				15		
	72				10	4	1		3			9		11				14		
			2		9							15		16				1		
	71				3	2						4		6				14		
	39	1	9		1				2									1		
	26							1	2			6		1				1		
	17	1			1	1		2		2		1		2				4		
					1					1								3		
	8											2		9				2		
		3																		
Spring trap	20						1										1			
	20															1	6	6		
	17						7	1			1					5	33			
	20						9							1	2	3	29			
	76				4		49								7	2	44			
Spring travel	22						3				1						1			

skinned. If so, the hide was peeled from the lips a short distance over the muzzle. This might not be done, however, until the hide was taken from the rest of the carcass. In either case, the pelt was removed from the body with a knife cutting from the posterior end. When the forelegs were reached, the hide was freed as far as the wrists. The paws were severed and left attached to the hide. The skin was then removed from the head by freeing it around the eyes, nostrils and mouth. When it was removed, the nose cartilage which was later removed, was left attached. The hide was now turned right side out and hung over a pole inside the lodge to await stretching and drying.

Next, the carcass was dressed. First, a transverse cut was made from the ventral side of the tail near the base passing between the vertebrae but not through the flesh on the dorsal side. A cut was now made from the left clavical along the left side of the body to the left side of the groin. A similar incision was made on the right side of the carcass. The pelvic girdle was separated along the pubic symphysis. Next, the sternum was severed from the ribs by cutting through the costal cartilage. The contents of the body cavity were freed at the posterior end. Then a slit was made from the clavicals along the sides of the neck to the head. The trachea and oesophagus were severed near the base of the skull. The contents of the internal cavities were removed as a unit and thrown away. Following this, the meat was stripped from the rib cage to the spinal column. This meat, the forelegs, the rear legs, the tail and the meat from the dorsal side of the neck, were separated from the carcass in one piece. The head was severed from the spinal column but left attached to the flesh. It was then removed as a unit with the sternum and belly flesh. Four cuts were made through the spinal column breaking but not severing it completely. These breaks were made near the pelvic girdle, at the junction of the thorax vertebrae and near the first and second thorax vertebrae.

Otter pelts were generally worked within a day after the animals were butchered. The pelt was dried on a three-piece stretcher consisting of two moulds and a wedge. Spreaders were made to hold the tail open. These consisted of strips of wood ⅛ inch thick and ½ inch wide. The length of each varied according to the width of that part of the tail across which it was placed. At either end of the spreaders was a small pointed projection for insertion into the edge of the tail skin. One spreader, placed at the tip of the tail, varied somewhat. It was smaller, circular in cross-section and tapered to a point at either end.

The hide was reversed and slipped over the two moulds. The ventral area was placed on the bevelled side of the moulds. The forelegs were then reversed, the paws severed and the openings tied with a slip knot. The skin of the hind legs was stretched taut along the outside edges of the moulds and held in place by wrapping with string. Following this, one flesh side of the hide was rubbed with water and then scraped with a butcher knife beginning at the head. Next, the other flesh side was worked in the same way. The wedge was then inserted between the two moulds and driven in tightly. To accomplish this, the operator grasped the ends of the moulds and held the stretcher and hide vertically. He then



Graph 2. Number of hares taken weekly

forced the end of the wedge between the two moulds.

The tail skin was opened and spreaders inserted transversely, starting at the base of the tail and progressing to the tip. First, parallel openings were made along the edges of the tail skin at intervals of one to one and a half inches. The ends of the spreaders were inserted in these. The one near the tip of the tail was thrust completely through the openings so that it extended farther beyond the tail than the others. Some hunters reused the spreaders year after year rather than making new ones for each occasion.

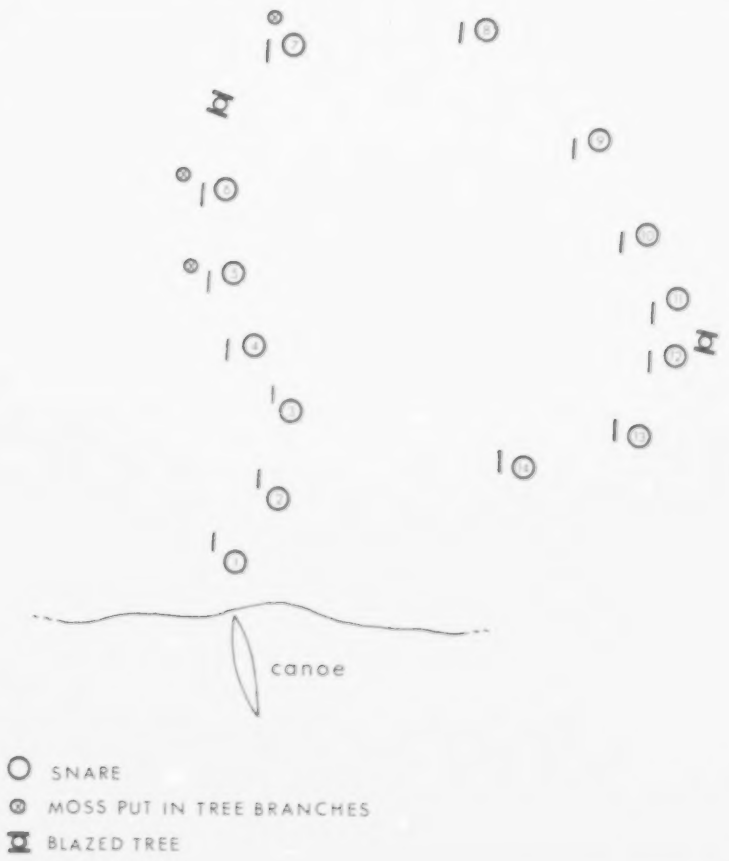
Next, the wedge was pounded firmly into place. A string was tied about the last spreader in the tail and the latter pulled taut. The tail was held in position by conveying the string over the end of the wedge, extending it to the posterior end of the hide, inserting it through the anal orifice and tying it. Now, a hole was made in the cheek on each side of the mouth. Through these two openings a string was inserted and the mouth then partially closed by drawing the ends of the string together and tying them.

The hide was dried on the stretcher for several days. During this period, it was laid across poles near the roof of the lodge. At the end of this time, it was removed from the stretcher and stored.

The forepaws, when removed from the pelt, were tied together with string and hung inside the lodge. These were employed in the "Otter Paw" game. Otter bones were deposited on a cache rack with other animal bones, or, if a rack was not available, thrown in the water.

Hare

Formerly, hare were hunted throughout the year with spring-pole and tossing-pole snares. During 1953-54,



Map 7 Rabbit snares

they were captured in snares, generally the stationary type, or occasionally shot with a .22-calibre rifle. The most productive period was during the fall (*see* Graph 2).

Snares were set in runways. During the summer and fall and probably, on occasion, the winter, the hunter made a circuit of ⅛ to ½ mile, sometimes farther. He usually started at the shore of a lake or stream and set snares wherever he crossed a runway. Occasionally, a handful of moss was placed in the branches of a nearby tree or a tree was blazed to mark the location. Map 7 shows the location of snares set on one occasion by the leader of the Matoush hunting group during the period of Fall Travel. During the winter, snares were often set when the men were trapping other animals.

Hare skins were removed by hand; the operator seldom used a knife. The skin was broken about the ankle of one hind foot, down the inside of the leg, across the crotch and along the inside of the other leg. It was then

detached from around the second ankle. Next, the hide was peeled from the legs and hips, leaving the tail attached to the carcass. The hide was then removed from the body and over the shoulders. The forelegs were drawn out of the hide as far as the wrists. Here the feet were severed with a knife and left attached to the hide. The pelt was then pulled over the head. The ears were severed about halfway from the skull and the hide cut from about the eyes and mouth.

If hare were caught while the hunting group was travelling, the animals were, on occasion, partially dressed. This was done by first severing the front paws and then peeling the skin back to the chest starting from the posterior as described above. Following this, the hind paws were removed and the tail torn from the carcass. The abdominal wall was slit and the intestines removed. A cut was made at the second joint of the hind legs and the backbone was broken in two places. The carcass was slightly bent and the skin drawn back into place, covering the carcass and stumps of the hind legs. The opening was then tied with thong or string.

After a hare was skinned, the pelt was dried. The hide was turned inside out and stuffed with cloth. The Mistassini Indians claimed that the skin was not strong enough to be placed on a wooden stretcher. A day or less was sufficient to partially dry the hide after which, without further treatment, it was ready for use as a stocking.

Hare skins were also employed in the manufacture of blankets and jackets. For these, the hide was cut into narrow strips. There were two ways in which this could be done. One method consisted of erecting a small post with a subconical top over which the hide was placed, flesh side out. Cutting began at the bottom edge and continued spirally until the head was reached. The continuous strip so produced was about ¼ inch wide. In the second method, the hide was suspended from the nose, fur side in. The operator began at the bottom, holding the skin taut in her left hand and using her left thumb as a gauge. She held the knife in her right hand and cut the hide spirally.

After the hide was cut, the strip was twisted. First, a short stick was split at one end and one end of the strip of hide inserted in the cleft. The stick was grasped between the palms of the hands and rotated in the same direction until the strip of hide was properly twisted. After the strip was twisted, it was carefully stretched. As the hide was pulled, it was said to "spin" rapidly. When it ceased spinning, the stretching was completed. The strip was now round in cross-section, firm, and with fur evenly distributed on the surface. The cutting, twisting, and stretching were done with skins, either green or, if dry, first softened in water.

Finally, the strip was "frost dried" for a week or ten days apparently by either suspending it between two poles or by coiling and hanging it outside the lodge. This was said to insure permanent flexibility. A hide thus treated, retained its pliability even after repeated wettings.

When an abundance of hares were taken, the meat and intestines were dried. The bones were fed to the dogs. Occasionally, even the carcass was boiled for dog food. The skulls were often hung in a tree.

Mink

Mink were hunted during the winter, primarily from November through March (*see* Table 2, p. 48). Generally they were eaten only in early winter when they were fattest. The pelts, however, were of value all winter. Formerly, deadfalls were used to capture mink. Recently, steel traps have come into use.

Mink pelts were cased. Skinning was performed with the aid of a small jack-knife. The first and apparently most common of the two methods used was similar to that used for otter except for minor variations. In the case of mink, no cut was made the length of the tail along the ventral line before flaying. Instead, the tailbone and flesh were pulled directly out of the skin. Furthermore, the forepaws were left attached to the carcass rather than to the hide. The second method consisted of freeing the pelt from about the mouth and then peeling it back over the head and neck. When this had been done, a string was tied around the neck of the animal and attached to the operator's extended foot. The hide was pulled from the shoulders and forelegs. The forepaws were either severed at the wrists, as with otter, or the skin cut about the wrists. Following this, the operator continued to pull the hide from the body, separating it from the carcass with a knife when necessary. Next, the hide was detached from the hind legs as it had been from the forelegs and stripped from the tail. It was then cut along the inside of the hind legs and across the crotch in order that it might be placed on a stretcher.

After the animal was skinned, the flesh side of the hide was sometimes rubbed with a little water and scraped lightly with a knife. It was then reversed and washed in cold water. Occasionally, soap was used. Finally, the hide was wrung out and hung over a pole. When the pelt had dried, it was turned inside out and placed on a three-piece stretcher similar to those employed for otter pelts. The process was the same as described for otter, except that there were no wooden spreaders inserted in the tail; nor was the tail pulled taut. After the hide was in place, a cut was made the length of the tail along the ventral line and the tail skin spread open. A long triangular piece of cardboard was cut and fitted against the flesh side to hold it open. The hide was now lightly scraped with a knife. Any holes in the pelt which had resulted from the trapping or skinning, were sewn closed. A looped string was slipped over the ends of a small stick inserted through the eyeholes and the hide was thus suspended near the roof of the lodge. Occasionally, the lower lip was pierced and a suspension string attached here using one or two overhand knots. Pelts were dried for approximately 24 hours and were then removed from the stretchers and tied in a bundle. The hide was left flattened and inside out.

Mink bones were placed on a cache rack with other animal bones or tied in a bundle and hung in a tree. Sometimes a whole carcass was tied to a tree. The scent glands were saved and used for trapping.

Marten

Marten, like mink, were hunted during the winter (*see* Table 2, p. 48). Generally, they were eaten only during early winter when they were fat. In the past, they were captured

with bows and arrows and deadfalls. Later, steel traps came into use but deadfalls were still occasionally used even as late as 1954.

Marten pelts were cased in approximately the same manner as the second method described for mink. The differences were that first the pads of the head and forefeet were slit, and each slit continued a short distance down the inside of each leg. Also, after the forelegs were pulled out, the skin was separated from the tops of the feet and freed near the claws. The pads were not removed with the hide. The hind legs were separated from the hide in the same way. After the hide was removed from the carcass, it was slit from the anal orifice down the inside of the hind legs to the original cuts in the pads. A helper, often a child, held one leg while the operator held the other and did the cutting with a small jackknife. Also at this time, the tail was cut open along the ventral line. The hide was now turned right side out. One informant stated that the reason for skinning marten from the head was that the cuts in the hide of the hind legs and tail could be made more evenly after the hide was removed from the carcass. The pelt, turned inside out, was dried on a three-piece stretcher. Green spruce twigs were placed in the foreleg skins to hold them open.

The bones of marten were treated in the same manner as those of mink.

Ermine

Ermine were taken by accident rather than intent in traps set primarily for mink (*see* Table 2, p. 48). They were skinned in the same way as the first method described for mink, although the tail was not cut along the ventral line. The hide, after being removed from the carcass, was washed in hot water and soap. It was then squeezed to remove the water. The pelt was dried on a three-piece stretcher. When being dried, it was laid across poles overhead, inside the lodge. The carcass was thrown away.

Squirrel

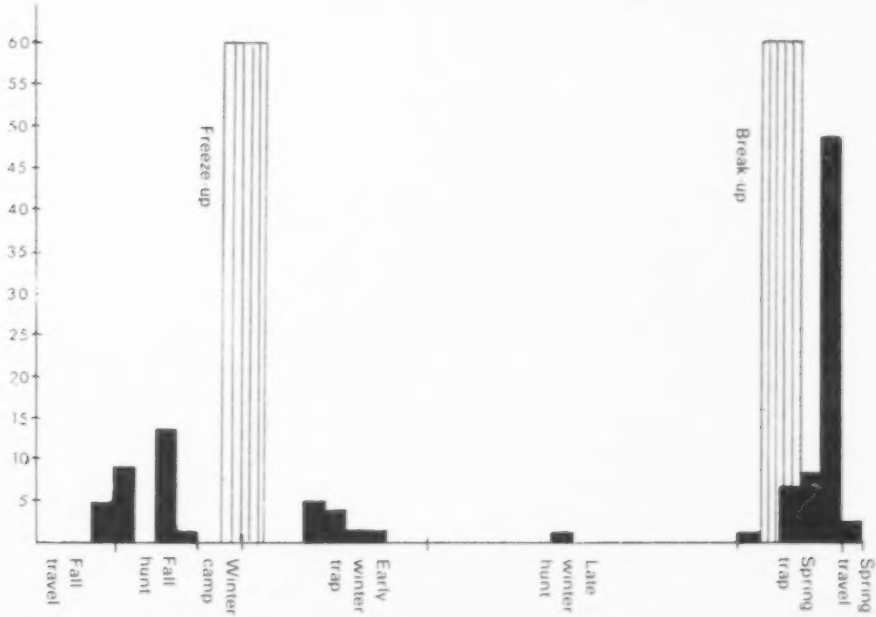
Squirrels were killed at any time of the year (*see* Table 2, p. 48). This was more for sport than for the meat or pelts. They were, as a rule, eaten only by the children who set stationary snares for them. Adults used .22-calibre rifles and slingshots to kill them. They were also accidentally caught in mink traps. Occasionally, when a squirrel was seen in a tree, it was set on fire or felled to force the animal to the ground where it could be clubbed to death.

Squirrels were skinned in substantially the same manner as ermine. After the animal was flayed, the flesh side of the hide was scraped lightly with a knife. Next, it was turned right side out and washed. No soap was employed. The pelt was then wrung out and hung overhead to partially dry before being placed on a three-piece stretcher. Following this, it was laid across several poles overhead to dry.

Muskrat

Muskrats were hunted during the fall and also intensively in late spring (*see* Graph 3) when they were fat and considered best for eating.

Formerly, muskrats were killed with bows and arrows. At the time of field-work, they were captured in steel traps or shot with 22-calibre



Graph 3. Number of muskrats taken weekly

rifles. Occasionally, they become entangled accidentally in gill nets.

Muskrats were skinned in the same manner as first described for mink and the pelts were then dried on three-piece stretchers. A hide was occasionally pulled taut by securing a string to the posterior edge of the hide. The string was brought around the end of the wedge to the other edge of the hide where it was tied. Pelts, when drying, were hung from a horizontal pole either inside the lodge or outside if the weather was warm. The suspension string was tied either at the head of the hide or to the exposed end of one of the moulds.

After a muskrat had been skinned, the carcass was dressed. When there was an abundance of muskrats, most of the meat was dried. The carcass was split along the ventral line and the backbone broken near the centre. The head and tail were left attached. It was hung, ventral side up, over one of the poles located in the top tier of a double fish-drying rack. The drying process took about two days.

Lynx

Formerly, lynx were captured in stationary and spring-pole snares, but recently steel traps have been used. They were hunted during the fall and winter and were considered excellent eating.

Lynx hides were cased. Skinning commenced at either the anterior or posterior end exactly as with mink. A

slightly different method of flaying lynx was reported by one informant. First, the tuft of fur at the chin was removed and deposited in the fire as it was full of fleas, especially during the spring. Skinning was begun at the mouth and the head was skinned as far as the neck. Skinning was then completed working from the rear toward the head. The informant explained that the head was skinned first, because it was a delicate job which was easier to do if there were less fur. The hide was dried on a three-piece stretcher.

Fox

Foxes were captured in stationary and spring-pole snares and steel traps. Also, they were shot and, if surprised when swimming, struck with a canoe paddle or a stick. Generally, foxes were flayed in the same manner as weasels. If, however, it was a large fox, it was skinned in a manner similar to the special case described for lynx. After the skin had been placed on a stretcher, green spruce twigs were inserted in the foreleg skins, as with marten. The carcass was hung in a tree near camp, high enough so that the dogs could not reach it.

Wolverine, Wolf, Skunk, Woodchuck and Fisher

The capture and processing of these species were not observed and little data could be obtained as to how this was done. Fisher were hunted during the late fall and winter. They were captured with deadfalls and steel traps similar to those used for mink. Wolverine, wolves and skunks were caught in steel traps and shot. Hunters attemped to hit the latter in the neck, apparently to cause instantaneous death. If they were to be eaten, the scent glands were first removed. Wolverine were generally captured by accident in traps set for other animals and skunks in traps set for mink. Woodchucks were captured in deadfalls and snares. Wolverine and wolves were skinned from either the head or tail, the same as mink.

Porcupine

Porcupine were killed by striking them on the back of the head with a stick or an axe. If the porcupine was in a tree, the tree was chopped down to dislodge it. Adults were eaten and foetuses were considered delicacies.

Porcupine were transported to camp with a *nimapan,* if no sled or toboggan was available. The *nimapan* was folded several times and the resulting ends tied to either the right front and hind feet or left front and hind feet. The animal was carried on the hunter's back with the *nimapan* passing across his chest. Sometimes, the hunter first removed the contents of the stomach cavity and singed the quills.

When the porcupine was dressed, a short slit was made along the ventral line in the stomach and some of the contents were removed. Afterwards, the cut was closed with a wooden skewer. The quills were then singed in an open fire if this had not been done previously. A portion of the animal was singed in the fire; this portion was scraped and any remaining quills plucked out. This process was repeated until all the quills were removed either by singing or plucking.

After the quills were removed, the pads on each foot were cut off and the carcass washed in warm water. Next, a cut was made from the left

clavical along the left side of the sternum to the left side of the crotch and continued to the base of the tail. A similar cut was made on the right side. Following this, a transverse incision was made on the ventral side of the neck and at the base of the tail. These cuts freed a ventral strip extending from the neck to the base of the tail which included the sternum and belly flesh. The remaining contents of the body cavity were now removed and the blood poured out. Next, the right foreleg and scapula were separated from the spinal column along with the flesh and hide over the rib cage. A cut was made through the pelvic girdle from the ventral side along the pubic symphysis. The right half of the pelvic girdle was now removed from the spinal column along with the right hind leg. The same procedure was followed on the left side of the carcass. This resulted in two sections each consisting of a foreleg and hind leg connected by the flesh from the side of the body. These sections were now cut into strips. A cut was made between the scapula and humerus and continued for the length of the section passing through the side flesh and between the pelvis and femur. A similar one was made between the humerus and radius and the femur and tibia resulting in three strips from each side of the animal.

The tail was now severed from the backbone at the base. The lumbar vertebrae were severed near their juncture with the thorax vertebrae which were severed near the posterior end of the rib cage and again near the anterior end. The head was separated from the cervical vertebrae.

Capture and Processing of Birds

Ptarmigan, Spruce Grouse and Ruffed Grouse

Ptarmigan were hunted during the winter after they had migrated from the north. Spruce grouse, while taken principally during the winter, were also occasionally hunted during other times of the year (*see* Table 2, p. 48).

Formerly, ptarmigan and grouse were killed with crossbows and bows and blunt arrows. Hand-operated snares were used for spruce grouse and stationary snares for ptarmigan. Ptarmigan were also caught in nets. At the time of fieldwork, they were killed with .22-calibre rifles and occasionally with sling shots.

As a rule, immediately after a bird was killed, the feathers were plucked from the breast. After the hunter returned to camp, the bird was completely plucked, including the head. Following this, the neck skin on the ventral side was broken, the oesophagus and trachea were separated from the skull and the feet and pinions were severed. Then, the skin was broken transversely across the carcass at the posterior end of the sternum. The pelvic and lumbar vertebrae were bent slightly toward the back of the bird and the contents of the body cavity removed.

Another method of dressing these birds was to break the skin anterior to the sternum and remove the crop. The skin was then pulled back to expose the body cavity and the contents, except sometimes for the trachea, were removed. Following this, the skin was drawn back over the sternum and the blood wiped on the carcass which was now ready for spitting.

In a third variation, the crop was removed and a cut was made along the ventral line on one side of the keel. The breast, wing, leg and meat were removed in one piece from one side and then from the other side. The sternum was broken from the carcass and the body contents removed. The four sections were then ready to be boiled.

The liver, heart and gizzard were saved to eat and were sometimes washed. To clean the gizzard, the operator broke it open with his or her fingers. The intestines of willow ptarmigan were eaten but not those of rock ptarmigan.

If an abundance of any of these species was secured, the birds were dried or frozen after dressing. The remains, including the bones, were fed to the dogs.

Plate X. Canoe with duck blind

Ducks, Geese and Loons

Ducks, geese and loons were hunted during the early fall and intensively during the spring (*see* Table 2, p. 48). Also loons especially were killed during the summer, whenever possible.

In the past, waterfowl were taken with bows and arrows and one informant claimed that snow geese were taken in nets. Decoys were used for geese, black ducks and American mergansers. Blinds, placed on canoes or on shore, were also used (*see* Plate X). Geese and both species of loons were attracted by a human imitation of their cry. By these methods, waterfowl were lured within range of shotguns and .22-calibre rifles.

When a loon or a goose was killed, a wing feather was often thrust through the nostrils. During the spring, if the hunters were not returning immediately to camp, the birds were buried in the snow. After the birds were brought into camp, they were plucked, except for the front of the head and the pinions (*see* Plate XI). The down and the small feathers were often separated from the larger ones. Next, the pinions and frequently the upper mandibles were removed. Then the remaining pin feathers and down were singed in an open fire by holding the bird over the flames with a sharpened stick thrust through one wing. After a section was treated thus, the area was scraped with a knife to remove the carbon. When completely singed, the carcass was placed in warm water and scraped again (*see* Plate XII).

Ducks were dressed in the following manner. The neck skin was slit along the ventral line from the body to the base of the lower mandible. The trachea and oesophagus were severed at the base of the head. Next, a slit was made along the ventral line from the sternum to one side of the tail and the body cavity contents were removed. If the duck was to be

Plate XI. Plucking ducks

Plate XII. Scraping ducks

boiled, a cut was made on one side through the rib cage from the back. A slit was also made the length of the breast on either side.

When many ducks were taken, they were dressed in two sections. The meat was cut, starting at the ventral line, from the rib cage on either side of the carcass. The cuts were continued so as to remove the wings and legs. The two side pieces were left attached to one another. The backbone was broken at the centre. Then the two sections were hung on the top platform of a double tier fish rack. The section consisting of the sides was hung with the skin side up. The backbone was hung with the ventral side up. The meat was dried for several days.

Loons were dressed in the same way as first described for ducks, although there was a second method. In this case, the bird was plucked, and then the pinions severed. The carcass was singed, the feet and tarsi removed and the body scraped and washed in warm water. Next, the wings were severed at the second joint and a slit was made along the dorsal line starting at the anterior end of the neck. The head was removed and a cut made into the skull from between the mandibles. Following this, the meat was stripped from the rib cage on each side along with the wing and leg. These pieces were then cut in half. The sternum was removed by cutting through the ribs on either side and the neck severed from the thorax vertebrae. The gizzard was cleaned with a knife.

The bones of ducks, geese and loons were generally placed on a cache rack with other animal bones, if one was available, otherwise, they were thrown in the water. However, during late spring, just before returning to the summer encampment, the bones were never thrown in the water, since it was believed that they would cause the water to rise in the lakes and rivers, making it difficult to negotiate the rapids. Instead, they were thrown on land if there was no cache rack. Sometimes, the sternum of a loon was tied to the branch of a tree. Loon skulls were placed on a stick which was then tied to the trunk of a tree. This was

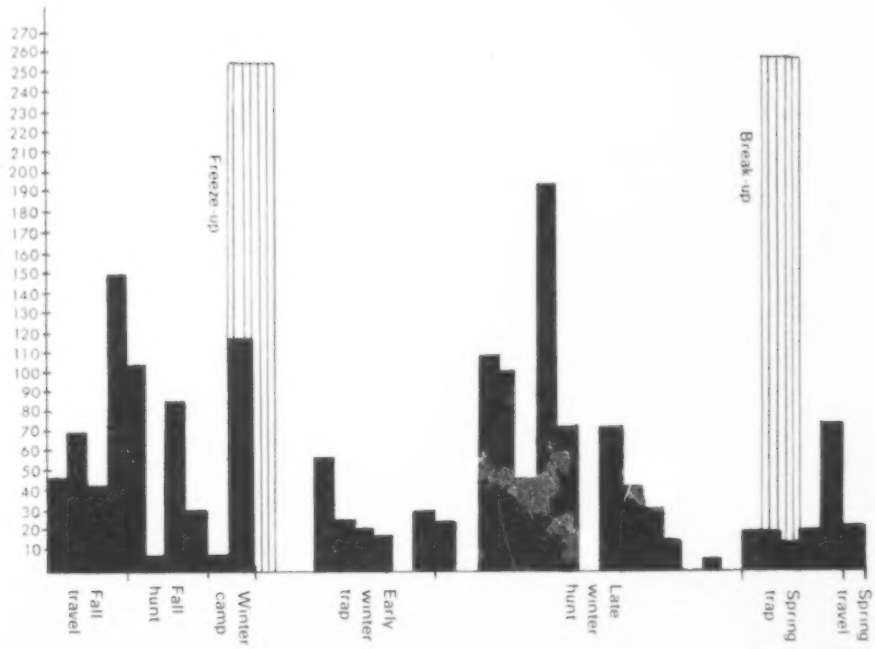
similar to the treatment accorded bear skulls. The pinions of ducks were generally attached to the branch of a tree, the proximal end of the pinion being tied to the branch with string. Occasionally, the feet of ducks and geese were tied together at their proximal ends and hung inside the lodge. The upper mandibles of ducks were placed on a slender stick which was thrust through the nostrils and hung outside. The small feathers and down were stored in bags for use later in making pillows and mattresses.

The Capture and Processing of Fish

Fishing equipment possessed by the Mistassini Indians was limited to hooks, fish poles and gill nets, with floats and sinkers. Gill net poles were additional gear for the winter. Among the western Mistassini spears were also used. Composite hooks were formerly used with set lines and for jigging. Among the Matoush group fish were taken throughout the year, except during freeze-up, (*see* Graph 4). In a sample of 216 fish were the following numbers for each species: common sucker, 71; whitefish and pike, 35 each; walleyed pike, 34; lake trout, 32; speckled trout, 6; red sucker, 3; and ling or burbot, 0.

Gill nets were set throughout the year except for a week or two at the time of freeze-up. They were obtained from the trading companies or made by the women. During the winter, gill nets were set under the ice. The net was prepared inside the lodge—floats and sinkers attached, and the net folded and wrapped in a piece of canvas. It was transported to the fishing grounds with a sled and dogs. Also taken were an ice chisel, large snowshovel, long cord and an axe.

On reaching the fishing grounds, the fisherman chopped a series of holes through the ice in a line at right angles to the shore. The holes were rectangular, approximately one by two feet with the long axis in line with the holes. An ice chisel was used to make the holes and the broken ice was removed with a large snowshovel. The ice was placed on the lake side of each hole. The spacing of the holes depended on the length of the gill net pole. The distance between the first and last hole was approximately 150 feet for a 100-foot net.



Graph 4. Number of fish taken weekly

After the holes were made, the gill net pole was thrust into the hole farthest from shore. Before the pole was completely under the ice, a cord, longer than the distance between the first and last hole, was attached to the exposed end. The pole was then slid the rest of the way under the ice so that the forward end was at the second hole and it was then forced toward the third hole with a forked stick. As the pole was forced forward under the ice, it was directed towards one side of the succeeding hole. It was then swung back toward the hole and arrested by a snow-shovel or stick held by a second person. This process was continued until the end of the gill net pole reached the hole nearest shore at which point the pole was taken out of the water and the string was untied. Boughs were then placed about the hole and the canvas bundle, containing the net, was placed on them. The string which extended under the ice was tied to the ends of the salvage lines at one end of the net. Following this, the string was withdrawn from the hole farthest from shore, generally by a second man. As this was done, the net was carefully unfolded and guided into the hole and under the ice. When this had been completed, the inshore ends of the salvage lines were tied to a black-spruce pole which had only the top branches left. The pole was thrust through the hole and into

Plate XIII. Removing fish from gill net (1)

the bottom of the lake. At the other end of the net, a large stone was tied to the end of the bottom salvage line and the stone allowed to fall to the bottom of the lake. Next, a pole was placed in the snow to one side of the hole and inclined over the hole. A short pole was now prepared which had only a stub of a branch left attached at one end to act as a hook. The top salvage line was tied to the end of this pole and the pole hooked over the inclined pole with the opposite end extending into the hole. If the water was not too deep, both salvage lines were attached to a single pole which was placed in the hole and forced into the bottom of the lake. The vertical pole at the other end of the net was then removed from the bottom and moved shoreward to stretch the net taut and then again forced into the bottom.

If the ice was several feet thick, it took nearly all day to set a net; but when it was only several inches thick, it took no more than two hours.

When a gill net was tended during winter, the first and last holes were cleared of ice with an ice chisel and snowshovel. One hole was enlarged to approximately one and a half by three feet with the long axis in line with the net. The section of the hole farthest from the net was not cut completely through. Only enough ice was removed to form a shelf which held four to six inches of water. The salvage lines were withdrawn from the other hole and a string attached.

Plate XIV. Removing fish from gill net (2)

The net was now retrieved at the enlarged hole. After a section was removed and examined, it was piled on the shelf. Care was taken to keep it submerged so that it would not freeze.

If the weather was windy and cold, as it often was, when the net was tended, a wind break was erected on the windward side of the enlarged hole. It consisted of several poles placed upright in the snow with the ice which had been removed from the enlarged hole packed about their base. A tarpaulin was then stretched over the poles with the ends wrapped about the outside poles. The lower edge of the tarpaulin was banked with snow.

Fish were removed from the net in one of several ways, depending on the species, the way in which they were caught, and the weather. If only the head of the fish had penetrated the net, the strands were removed from under the gills and then pulled over the fish's head (*see* Plate XIII). If the fish had penetrated further, the net was slipped over the fish's tail. When the net was removed in this manner, the fisherman sometimes grasped the snout of the fish with his teeth leaving both hands free to manipulate the net (*see* Plate XIV). If the snout of a pike was caught in the net, the maxillary was first removed. The fisherman did this with either his teeth or fingers. Sometimes, if the weather was very cold, the strand forming one side of the mesh holding

the fish was broken so that the fish could be rapidly removed. The net was reset in the same manner as it had been originally placed under the ice.

Nets were frequently changed, since if they remained in the water too long they deteriorated. They were taken out in the same manner as when they were tended. The only exception was that a cord was not attached to one end of the net unless a second net was to be set. After a net had been removed, it was dried.

During the summer, nets were set from a canoe. Generally, the sinkers were attached before the fisherman left camp. The net was set at right angles to the shore. On or near the bank, the fisherman attached the ends of the salvage lines to a large stone, branch or bush, or a pole thrust into the lake or river bottom. The net was then lowered into the water as the canoe was guided away from shore. As this was done, the floats were attached, and the other end of the net was anchored with either a stone or a pole. Before the stone was released or the pole erected, the net was pulled taut.

Nets were also tended from a canoe but the salvage lines did not have to be untied from their moorings. Starting near shore, the net was lifted from the water and the fish removed. If the net was to be retrieved, the fish were removed and, at the same time, the sinkers and floats untied. Following this, the salvage lines were untied from their anchorage at one end. As the net was pulled from the water, it was folded. When the other end was reached, the salvage lines were untied.

Set lines were only used during the winter months and then not extensively. They were set in deep water

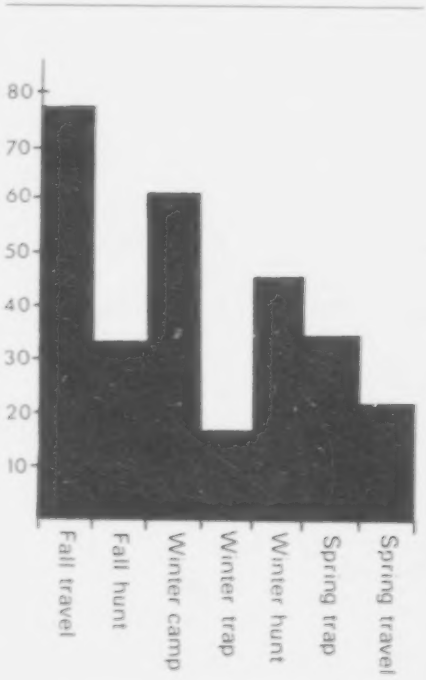
Plate XV. Jigging for fish

for lake trout. The method of erecting a set line has been detailed in a previous report (Rogers 1967). It took about 20 minutes to set a line when the ice was no more than one and a half to two feet thick. Jigging was not extensively practised (*see* Plate XV). It was employed during the winter only, and lake trout were the principal fish caught. A short pole, approximately one and a half feet long and less than one inch in diameter, was used. A hole, about one foot in diameter, was chopped through the ice. The hook, with stone sinker attached, was lowered into the water. After the hook touched bottom, the line was grasped at water level and removed. The point where the line was grasped was attached to one end of the pole by a lark's-head knot. The end of the pole was occasionally grooved to receive the line. Sometimes the free end of the line was attached to the other end of the pole by a clove hitch. The remaining line was then either wrapped about a stick

which was placed in the snow to one side of the hole, or about a piece of cloth or paper and held in the fisherman's hand. After this had been done, the hook was again lowered into the water.

During the 1953-54 season, the Matoush hunting group secured approximately 3,000 pounds of fish. An estimated 2,000 pounds were fed to the dogs or used as trap bait. The remainder was consumed by the members of the group. A few trout were taken by trowling and with set lines, all other fish including trout were captured in gill nets. The numbers of fish taken varied according to the particular period of the year (*see* Graphs 4, p. 61, and 5). At freeze-up, fish could not be taken because of ice conditions which explains why there were none caught during the period of Early Winter Trapping. Furthermore, when big game was taken in quantity, fishing operations decreased since there was sufficient food and time had to be spent in processing the kill. Also, the lack of fish caught during the latter part of the Winter Hunt Period and early Spring Trapping Period was the result of the fact that at these times of the year the group was moving overland back to where they had left their canoes the previous fall. Accordingly, there was neither the time nor appropriate places for fishing. The major fish caught during winter was the common sucker.

There were two basic methods of dressing fish depending upon whether the product was destined for human consumption or dog food and trap bait. In the former, there were a number of minor variations depending upon the species. Fundamentally, the method consisted of splitting the fish along the dorsal line.



Graph 5. Average weekly number of fish caught for each economic period

They might or might not be first scaled and skinned according to the species. Finally, they were washed in cold water. If they were to be used for dog food, fish were split along the dorso-ventral plane but were not scaled, skinned or washed.

Fish for human consumption were dressed in the following ways: at least two methods were employed in preparing walleyed pike. In one, the anterior dorsal fin was first removed and then the fish was scaled and the head severed from the ventral side. Next, a cut was made from the head to the tail along one side of the neural spines and continued over the rib cage and into the body cavity. Following this, the contents of the cavity were removed and the tail severed from the carcass. These last two

steps were sometimes performed in the opposite order. The operator then wiped the fish with his or her hands to remove the excess scales and washed it.

Occasionally, walleyed pike were skinned. After the anterior dorsal fin was removed, a cut was made the length of the body on either side of the stomach and on either side of the neural spines. Next, the skin was severed around the body at the base of the head. It was then pulled from each side starting at the front. After this was done, the head and tail were removed. One of the cuts already started along the sides of the neural spines was continued over the rib cage and into the body cavity. Now the internal organs were removed and the carcass wiped and washed as above.

One method of preparing whitefish was to scale them, sever the head from the ventral side and occasionally to remove the tail. A slit was then made the length of the ventral surface starting at the head and passing to one side of the ventral fins and the contents of the body cavity were removed. If the fish was large, it was often cut into several sections at right angles to the dorso-ventral plane.

A second method of cleaning whitefish was to remove the head and tail and cut along one side of the neural spines and over the rib cage in order to remove the flesh. Then the operator severed the ribs close to the vertebrae and removed them with the contents of the body cavity.

A final method of preparing whitefish, used occasionally, was to skin them.

Suckers were generally scaled first, although on occasion they were skinned. The head was then severed from the ventral side or occasionally from the dorsal side. Sometimes the head was removed before the fish was scaled. A cut was made along one side of the neural spines beginning at the head and the ribs were broken free of the vertebrae with the handle of a knife, starting at the posterior end and following the cut made previously. Next, the contents of the body cavity were removed. The tail was usually severed, although occasionally it might be left attached to the carcass. The fish was then wiped.

Lake trout were dressed in only one way, as far as was observed. A cut was made around the head just behind the first ventral fins, generally without severing the head completely. Next, a cut was made the length of the body and to one side of the neural spines. The cut was extended over the rib cage and into the body cavity. The internal organs and head were removed and the cavity cleaned of blood. The stomach was cleaned and saved. The carcass was then wiped and washed. If it was a large fish, it was cut into sections in the same way as whitefish.

Four slightly different methods were employed in dressing pike. In one, the fins were first severed from the body and the scales and skin were removed with a knife. The head was then severed from the ventral side and a slit was made along one side of the neural spines starting at the posterior end and continuing into the body cavity. The viscera and coagulated blood were removed and the tail severed. Finally, any remaining scales were wiped off.

In a second method, the fins were first removed and the skin slit the length of the body beginning a short distance from either side of the dorsal line. Similar cuts were then made on the ventral side outside the fins, and

the skin on either side removed by pulling from the head. Next, the skin on the dorsal and ventral sides was detached in that order. In the latter case, the skin was pulled from the posterior end. Following this, the head was severed from the ventral side. A cut was made along the ventral line from the anterior end to the anus and the contents of the body cavity removed. Lastly, the carcass was wiped and washed.

A third method was used for small pike. First, the fins were removed, and the fish scaled. Occasionally, this was done in the reverse order. Dressing was completed in substantially the same manner as the first method described for pike.

Formerly, when pike skins were used as grease containers, the skin was slit completely around the base of the head. It was then peeled from the carcass starting at the anterior end.

Fish used for dog food and trap bait were prepared in the following manner. The head was partially severed by cutting from the ventral side. It was then bent back, breaking the neck. Next, a cut was made along the neural spines for the length of the body and extended into the body cavity. The two halves were opened and the contents of the cavity removed. The carcass was now slit along the ventral line to the tail, leaving the halves attached at this point. Occasionally, after this was done, a cut located just anterior to the caudal fin was made from one side through the body.

During the winter, after fish were dressed, they were hung inside the lodge for a day. Then they were taken outside and placed on a cache rack or hung on a moose-drying rack and allowed to freeze. Here they remained until needed (*see* Plate XVI). Fish dressed for dog food and trap bait were hung on a pole which was inserted through the opening near the tails. Otherwise, they were hung with one-half of the carcass on either side of the pole. Those dressed for eating were hung with the flesh side next to the pole.

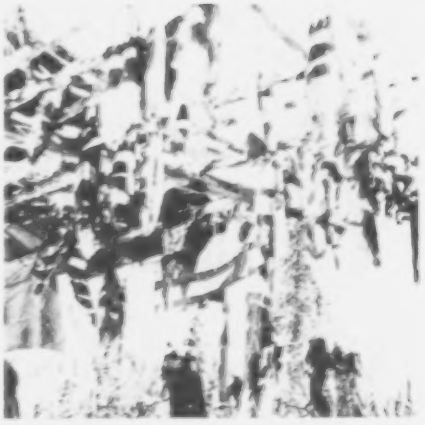


Plate XVI. Storage rack with fish

During the summer, fall and spring, if fish were not to be used immediately, they were dried in one of three ways, depending on how soon they were to be consumed. One method of drying was to place them in the sun for a day by hanging them on a horizontal pole. Fish dried in this manner were eaten within a few days. This process was used primarily during the summer.

If fish were to be eaten within a week or two, they were partly dried and then cooked on a fish-drying rack for several hours. For heat, a rather large fire was built. Occasionally, when they were to be dried in this manner, cuts were made in the flesh and the carcass sprinkled with salt, although the latter was used rarely. This technique of drying was often used when the

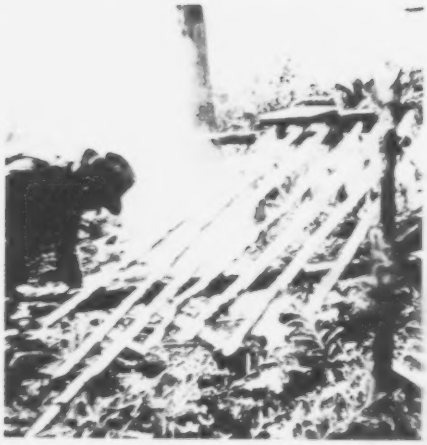


Plate XVII. Drying fish

Mistassini were moving to their hunting lands and during the fall hunt (*see* Plate XVII).

When fish were to be kept for longer periods, they were thoroughly dried. This method took more time and a smaller fire was used. Trout and whitefish were the principal fish dried. These species were preferred since they contained more fat than any others. The fat prevented the fish from becoming too "brittle." This process was employed during the late fall when fish were being prepared for winter use.

Dried fish were wrapped in sheets of birch bark or old canoe canvas when they were transported or stored.

All major species of fish were eaten, except suckers which were generally reserved for dog food and trap bait and ling which were thought to be very poor food, except for the liver which was considered a delicacy. Roe, stomachs of trout and whitefish, trout heads and air bladders of suckers were consumed. Pike fat was considered good eating. Fish that had been dead for some time when removed from the nets during the winter were eaten. The cold water was said to preserve them. The quality was believed to be improved, if fish were frozen after dressing and left in that condition for three or four days.

Except for the heads of pike and walleyed pike, fish remains were fed to the dogs. Even these were used occasionally, when dog food was scarce but only after the lower jaw of the pike was removed, because the teeth were said to be injurious to dogs. Often, very large trout heads, if they were not eaten by the Mistassini, were hung on a pole. If the head was eaten, the lower jaw would later be suspended from a pole.

Gathering of Vegetal Products

Formerly, gathering of vegetal products appears to have been emphasized to a somewhat greater extent than today. Yet, even then, it was far surpassed by hunting and fishing. No special equipment was employed nor was it at the time of field-work.

Berries were the principal vegetal food. Blueberries were the most important. Next were *wisAclmlnan* berries (either *Arctostaphylos rubra* or *Vaccinium Vitis-Idaea*). Others, of very minor importance, were squash berries, mountain-ash berries, pin cherries and raspberries. Red osier dogwood and juniper berries were not eaten. There was a difference of opinion regarding bunchberries. One informant claimed they caused constipation and death.

Blueberries were gathered by the women and children during the fall. The usual procedure was for the women and older children of the hunting group to work together. Each woman carried one or two large pails for herself and her children. After the berrying place was located, the pails were placed at a central point. From here, each individual with a smaller can or pail went in search of berries. When a person had filled the small container, he or she returned and poured the berries into the family pail then continued the quest.

Berries were poured into the larger pails from a height in order to winnow them. "Serious" berrying was conducted in the above manner. At other times, the children or a man, his wife and several of their children might gather by themselves, in which case no systematic procedure was followed. Berries were often picked and eaten whenever they were found. Sometimes, when blueberries were obtained in large quantities, they were made into jam.

Formerly, blueberries were dried for the winter. The berries were boiled until a thick jam resulted, then spread on birch-bark trays which were placed on the upper tier of a fish-drying rack where the heat and sun partly dried the contents. The process could be finished, if necessary, inside the lodge. The result was a flat cake which was sliced and eaten.

wisAclmlnan berries were gathered in the fall and spring. Those collected during the spring were considered most desirable since the winter freezing was said to have improved the quality. They too were made into jam.

In times of extreme scarcity, lichen was gathered and eaten. In the past, birch sap was sometimes collected and drunk. A horizontal slit was cut in the bark of a tree and a bark spigot inserted. The sap was collected in a cup. Spruce gum was procured and chewed whenever it was found.

Once goods had been secured they were used either by the individual who obtained them or by others. In the latter case, the goods possessed by one individual had to be transferred to another by some means. Accordingly, in this section, ownership of property, distribution of goods, and trade are discussed. Some of these data have been touched upon in preceding sections and, therefore, will not be repeated. Property consisted of "land" and its resources and chattel in the form of tents, canoes, motors, snowshoes, sleds, toboggans, nets, guns and tools. Religious lore and rites, in some instances, might be private property although adequate information regarding this is not available. However, certain rites appear to have been the exclusive property of the men.

All chattel was thought of as personal property. Each person was said to have his or her snowshoes, toboggan, axe and clothing. Each man had his own crooked knife, canoe(s), motor(s), tents, traps, *nimapan*, etc. Even children had their own possessions. Ownership of chattel included the right of disposal. This could either be in the form of a loan, gift or outright sale. A woman, for instance, who had made moccasins, had the right to sell them and keep the money. While this appeared to be the general rule, one case was observed of a woman selling her son's *nimapan* without, as far as it was known, prior consultation with him. Property was freely loaned with no payment expected in return. Game was considered the property of the person who secured it. For example, a woman who caught several trout on her set lines had the right to dispose of them as she pleased.

Formerly, there was apparently no theft of property. Cache racks were "sacred" and only under extreme conditions of privation would the contents be disturbed, although, as a measure of social control, the cache of a recalcitrant individual might be broken into. This pattern began to change, and a case was reported of a theft during the winter of 1953–54.

The distribution of goods, where no immediate return was expected, took place primarily between relatives and friends. As far as it is known, the goods consisted only of the products of the hunt. The recipient, in turn, was expected to share when he was successful in the hunt.

During the winter, moose and caribou meat and hides were distributed by the hunter to the other males in the group. This was done immediately after a kill was made and butchered. There appears to have been a fairly equal allocation to each member with the hunter perhaps keeping a slightly larger share. He was also apt to retain more of the delicacies. This might not, however, always be the case. On occasion, beaver, rabbits, grouse and waterfowl were presented by the hunter to others of the group. Lake trout, even if small, were always shared. The maker of beaver broth or bone soup shared it with members of the hunting group.

During the summer, moose meat was always distributed among those present at the Mistassini settlement. If there was not enough to go around, the old people were the first to receive a share. The hunter told the people to come to his camp and he would give them some meat. Formerly, when beaver were scarce, members of the Nemiscau Band, when visiting their relatives at Mistassini, brought them dried beaver.

There was always a distribution of food at feasts. This was true not only at feasts given by the hunting group during the winter but also at summer marriage feasts. The food might consist of any combination of the following: moose, caribou, bear, beaver, geese, loons, ducks and bannock. A larger amount of food was prepared, far more than those present could eat. During the course of the feast, all the food, with some exceptions, was distributed to the families present. This was apparently the major means by which bear was distributed. In one case witnessed, the hunter's older brother, the leader of the hunting group, gave a bear feast at which only a part of the bear was cooked and distributed. None of the bear had been previously shared. During the course of the winter at various other feasts, the rest of the meat was apportioned.

Furs were not shared to nearly the same degree as the hides of moose and caribou and their meat. However, beaver pelts were occasionally given to other members of the group by the men who secured them.

Families in need, whether members of the hunting group or not, were always aided. If a hunter should hear of or come across a family that was starving, which occurs rarely, if at all, today, he attempted to help them. If he had plenty of food, he either told them to come and get some, or if they were too weak, he took it to them. If he himself did not have enough to spare, he would try to kill game for them. If a man died, his wife and children were supported by other members of the group.

Western food, found abandoned by prospectors, was divided by the finder among the members of the group. This was not the case with food purchased at the stores or obtained through government aid. If a family was in need, they were given food, but it was expected that such a family would repay it in kind as soon as possible. Tobacco was seldom shared, and then apparently only at feasts and when visiting graves.

Gifts of a formal nature were rarely made. Information was obtained regarding only two. A pelt, sometimes a mink, was given to the deacon at Christmas time or on return to the settlement and a gift was given to a baby by the person who named it.

A limited amount of trade was engaged in amongst themselves by the families who gathered at Mistassini and also with families from neighbouring areas. Rabbit-skin blankets and moose hides were the only items of trade for which data was secured, although there is no doubt that other commodities were exchanged. A large rabbit-skin blanket sold for $30.00 and a small one for $20.00. Formerly, some of the northern families bought moose hides for a "little money" from southern families. Members of the Nemiscau Band were said to come to Mistassini occasionally during the summer to buy moose hides since there were no moose on their land.

Trade with the whites has existed since the establishment of the first trading posts. Furs were the primary commodity exchanged for Western goods. There was also some trade in moccasins and mittens, although for how long is not known.

Most foods were cooked before being eaten. One of the few that was not was the marrow from the metapodial bones of moose and caribou. Also, small pieces of marrow from other bones and fat were sampled raw, especially by the children. The contents of the caribou stomach (apparently, only the first) was mixed with a little blood, replaced in the stomach, and then partly dried. This might be eaten without further preparation, or it might be mixed with a little sugar and lard and partly cooked in a frying pan. Moose and caribou meat which had been thoroughly dried were often eaten without further cooking. The meat was sometimes first dipped in fat. Generally, lard was used, but fat tried out after ducks were cooked, was used also. Berries were often eaten uncooked.

Foods were prepared in one of several ways. Meat was boiled; roasted on spits or suspension cords; pan roasted, if an oven was available; and fried. Cereal grains, obtained from the stores, were generally baked or boiled. Occasionally, they were steamed.

Boiling was the most common method of cooking. Roasting by spitting and suspending was practised less often, although foods so prepared were considered delicacies. Boiled foods were generally salted lightly when cooked; roasted meats were rubbed with blood. These two methods of food preparation were undoubtedly aboriginal. Baking, except for bannock, and frying were seldom practised. These techniques were probably acquired from white men.

As a rule, meat was not washed since it was desirable to retain as much of the blood as possible. Exceptions were meat which had been singed such as porcupine, waterfowl, beaver tail, moose muzzle and fish.

Nearly all cuts of meat were boiled on occasion. This was the usual method for porcupine, completely and partly dried moose meat, dried bear meat, duck, loon, fish and whitefish stomachs. Generally, different species were cooked separately. Only hare and ptarmigan were observed being prepared in the same pot. Those species with appreciable amounts of fat, such as bear, beaver, porcupine, ducks, loon, trout and whitefish were boiled without lard. A small amount of lard was added when fish—unless they were fat—ptarmigan, hare, caribou and moose were boiled. Bear intestines were stuffed with fat.

Those meats listed above were often cooked in large kettles filled with water. When cooking sections of beaver, caribou and moose heads and backbones, the pieces were removed when half done and returned to the pot in reverse order.

Another technique of boiling moose and caribou meat was to cut it into small pieces and inch or so in diameter. The pieces of meat were cooked in a covered pot containing only a little water to which a small amount of lard was added. Ptarmigan and sections of fish were also cooked in this manner. Usually, flour was placed in the water to make a thin gravy. Small beaver tails, if boiled separately from the rest of the meat, were placed in a small amount of water and cooked for a few minutes.

Duck eggs were usually boiled until they were hard or, very rarely, they were fried.

The broth which resulted when meat, birds and fish were boiled was considered very nourishing. Occasionally, a thickening such as oat-

meal, barley or rice was added, particularly in the case of broth from birds and fish.

Foods cooked on a spit included: fish; ducks; hare; marten; mink; muskrat; squirrel; fresh moose meat, ribs and kidneys; bear forepaws; horned owl; ptarmigan; spruce grouse; fresh caribou meat, kidneys, nose and lip; beaver forearms, heart, liver and kidneys; ptarmigan liver and gizzard; trout heads and sucker bladders.

Spits were inserted in various ways depending on the piece to be cooked. They were forced through muskrat, squirrel and marten from the posterior end and extended the length of the body but did not protrude at the anterior end. The forelegs of marten were bent over the back and tied.

Globular pieces of moose meat were sometimes spitted without further preparation. Generally, they were first cut into a sheet. The spit was inserted along the long axis of the piece. The sheet was held open with several small sticks placed at right angles to the spit and embedded in the edges of the meat.

When bear forearms were spitted, the spit was inserted from the proximal end, and passed through the length of the arm as far as the paw. After the spit and forearm were placed by the fire, a pan was arranged underneath to catch the fat.

Ptarmigan and spruce grouse had the spit inserted in the region of the pelvis. The spit extended through the bird and emerged on the opposite side at the breast. The centre of the neck was then impaled on the end of the spit.

In spitting the head of trout, the spit was thrust completely through the skull from one side.

Certain game was suspended by a cord beside a stove. Knots were tied in the string several inches apart to prevent it from unravelling. In general, pieces of meat that were too large for spitting were cooked in this manner. Such foods included small beaver, caribou heart and shoulder blade, ducks, geese and loons.

Before a small beaver was suspended by the stove, the incision in the body cavity was closed with wooden skewers. One end of a string was secured to the base of the tail and the other end tied to a horizontal pole above and to one side of the stove. A pan was placed underneath to catch the drippings. The carcass was spun every few minutes to ensure even cooking. After it had been cooking for approximately half the necessary time, the carcass was turned end for end. To accomplish this, a small sharpened stick was inserted through each cheek of the head and a suspension cord attached to each of them.

A section of a large beaver consisting of sides, sternum, legs and tail was occasionally cooked by suspending it beside a stove. First, the legs were removed and then any incisions or holes in the meat were closed by sewing or with wooden skewers. The section was in the form of a sheet with a thick layer of fat on one side. This surface was sprinkled with salt and pepper. The other side was rubbed with blood. A tin plate was placed on the fat near the posterior end and another near the anterior end. The tail was folded onto the posterior plate. Next, the sides of the section were folded over the tail and then the edges sewn or skewered together. A stick was inserted through the meat at the base of the tail to which a suspension string was

secured. The drippings were caught in a pan.

Caribou hearts, still containing blood, were sometimes suspended by the stove. A wooden skewer was forced through the tissue at the top and a suspension cord attached to it. The juices were caught in a pan. To suspend the scapulae of caribou, a hole was made near the dorsal end of the blade through which a suspension cord was attached. Incisions were made in the flesh and lard was inserted. The drippings were saved.

Ducks were often cooked by suspending rather than spitting. The incision made in the body cavity when the bird was dressed was closed first. This method saved the fat which would be lost if a spit was inserted.

If an oven was available, certain foods were sometimes pan roasted. This was the case for mink, squirrel, fish, ptarmigan, spruce grouse, ducks, geese and loons. Fried foods included fish, caribou liver, the flesh scraped from beaver pelts and dried moose meat. The latter, with a quantity of lard, was actually warmed rather than cooked. Beaver blood was mixed with flour to form a paste and then fried. The blood of caribou was sometimes made into soup. It was thickened with oatmeal and boiled.

Flour was utilized most commonly for preparing bannock. The dough was generally cooked in a frying pan. Sometimes it was wound spirally about a spit and cooked either beside a stove or an open fire. One informant claimed that the dough was occasionally baked by being buried in hot sand. Bannock was prepared by mixing approximately two cups of flour with a heaping teaspoon of baking powder and a pinch of salt. To this was added about ⅓ cup of melted lard mixed with a cup of cold water. The dough was kneaded and pressed into a greased frying pan. It was cooked on top of a stove for about 15 minutes. The bannock was then turned over and left for the same length of time. If the stove was very hot, the pan was raised on a small tin can or balanced on three pebbles all roughly of the same size. If an oven was available, the dough was usually baked. It was turned when half cooked. Bannock was also cooked in a frying pan before an open fire. The pan was propped at an angle to receive the heat. The bannock was turned when one side was cooked.

Yeast bread was occasionally made. It was cooked on top of a stove in a cast iron pot or baked in an oven. When there was no baking powder or yeast, the women sometimes employed sourdough. Another type of leavening was made from the hard lumps of flour adhering to the inside of a flour bag after the latter had become damp. The lumps were pulverized and mixed with a little flour and water. The mixture was placed in a covered can and allowed to "work" for several days. It was then ready for use. No plants native to the area were known to have been used for leavening.

Cookies were sometimes made if an oven was available. Sugar, cinnamon and raisins, if in stock, were added to the basic bannock recipe. Each cookie was turned halfway through the cooking. Dumplings, puddings and doughnuts added variety to the diet. Dumplings were made of bannock dough and boiled with meat. Puddings, prepared for special occasions, such as feasts, consisted of bannock dough with molasses added. The mixture was packed in a small can, placed inside a larger one con-

taining water, and then steamed. Doughnuts were fried. Oatmeal was always boiled with a small amount of lard.

Beverages included water, bone soup, tea, beer and liquor. Water was obtained from a lake or stream adjacent to the camp and stored in the lodge in metal pails. During winter, large pails were used. Otherwise, the water would freeze completely during the night. At this time of year, water was always warmed before drinking. At times, it was impossible to obtain water during the winter. This happened when, for instance, a kill was made far from a spring or stream. In such a situation, the granular snow located near the ground was melted. Generally, though, every effort was made to obtain water rather than melt snow as snow was not considered good to eat.

Bone soup was made from the ends of the leg bones of moose and caribou. Formerly, the vertebrae of moose and caribou were also used, but after lard became relatively plentiful, this was not done. The bones were placed in a large kettle of water and boiled until the fat appeared on the surface. Next, snow was added. The broth was either hot or tepid depending on the amount of snow added. The way in which it was prepared was a matter of personal preference. After the soup was eaten, more water was added to the bones, and they were again boiled. This might be repeated as many as ten times before the bones were discarded.

The Mistassini claimed that formerly bone soup took the place of tea. Recently, when tea was scarce, bone soup was drunk during the day and tea reserved for the morning and evening. At the time of field-work, tea was the staple beverage. Sugar and cold water were added after the tea was boiled. At feasts, milk was mixed with the tea if it was available. Coffee was rarely drunk.

One informant claimed that formerly beer had been made from white-spruce twigs. Recently, it has become the custom to brew it from beans or occasionally rice. Beans were boiled in water with yeast and sugar. It might take as long as a week to prepare. Liquor was obtained from bootleggers located at Chibougamau.

Conclusion

There were two main reasons for preparing this study. One was to show the implications such data have for the archaeologist and the other was to show how a hunting and fishing people adapted to a sub-arctic environment and to the advent of Europeans.

The archaeological implications seem clear and therefore, only cursory attention will be given to them. It can be readily seen that mammal bones would be minimal at any one site unless the area of the bone cache adjacent to the camp was excavated. Fish bones would rarely be encountered since they would be scattered about the site. Furthermore, certain skeletal remains such as caribou and moose antlers and scapulae, and bear skulls and paw bones would be missing from the site. These were often some distance from camp. Finally, the cannon bones of caribou and moose and the bear tibia which were made into hide-working tools would often be missing. Thus, for such a hunting society, an analysis of faunal remains in an archaeological site could be most misleading. And, little else but faunal remains would be found in winter camp sites of the Mistassini (Quimby 1962).

The ways in which the Mistassini adapted to the environment and to contact with Europeans are not quite as clear as are the implications for the archaeologist. The data are limited and tenuous since there have been environmental changes (Rogers 1966), and at the same time, no doubt, introductions of traits from neighbouring groups. Furthermore, the Mistassini Cree have lived through more than 300 years of contact with Europeans. The Mistassini were first mentioned in 1642-43 (Thwaites 1896-1901, Vol. 46: 281) and a few years later they were contacted on their home territory (Archives des Colonies). Since then they have passed through various changes initiated by European contact.

The observations presented in the preceding account reflect the final phase of the *Fur Trade Era* in Canada and the following remarks can only be interpreted accordingly. The effects of European contact on the way of life of the Mistassini must always be taken into consideration.

The Mistassini were constantly adapting to a changing natural environment, innovations from neighbouring groups and European contact agents. The socio-political organization, religious views, role attributes, values and economic organization have been continually changing. This was a constantly evolving process although the foregoing discussion applies only to the period of field-work. Conditions before this period were not the same (Martijn and Rogers, 1969), nor have they remained constant since field-work was undertaken.

In 1953-54 the Mistassini lived primarily by hunting and fishing. Further income was derived from the exchange of furs for traders' goods, occasional wage labour and government allowances. With these, and medical services, the Mistassini have survived and increased in numbers.

The Mistassini possessed a relatively simple technology (Rogers 1967). This was derived in part from Euro-Canadians, increasingly so as the years passed and, in part, from the local flora and fauna, which supplied materials that could be fashioned into various items of equipment. Practically no use was made during

historic times of the rocks, minerals and soils of the area. The trapping of fur-bearing animals, government relief and some summer wage labour provided only a small monetary income, judged by Euro-Canadian standards, with which certain items of material culture could be secured from the trading companies. Although the technology was relatively simple, it was efficient and enabled the Mistassini to make a living within the harsh eastern subarctic environment of Canada.

Although technology was necessary for survival, the rituals which surrounded the search for and securing of game were, in the eyes of the Mistassini, as important as the actual means by which the animals were taken. From this point of view, the rituals were adaptations necessary for more effective exploitation of the environment which gave the Mistassini the faith to seek the game so necessary to their survival.

Although the environment had limited resources to offer the hunter who had only a limited degree of European goods at his disposal, the Mistassini in 1953-54 [illegible] made considerable use of those resources found within the area. One of the most important resources was food and approximately 70 per cent of all food consumed by the Matoush hunting group was derived from the land, mostly from mammals. Of the 28 species which inhabited the area, 15 were taken for food. "Big game" which included moose, caribou, bear and beaver was most important and the "big man" was the one who took such animals. The use of "big game" was necessary because smaller game existed in such minimal numbers and was so widely dispersed, that it could only serve as a supplement to the diet. A man simply could not cover enough territory in any one day to secure sufficient hares and/or other small animals to feed himself and his family.

In addition to mammals, birds were a part of the diet of the Mistassini. Although a number of different bird species could sometimes be found in the area, only large birds were eaten, except in times of starvation. Furthermore, most birds were seasonal and could not be depended upon for a yearly supply of food. This was true of waterfowl which only frequented the area during the spring and fall in any number. Few nested in the area. Grouse, on the other hand, were most numerous in early winter.

Fish, like birds, were only caught if they were large because the Mistassini had no equipment to catch the smaller species and undoubtedly, the labour expended to do so would not have warranted their being utilized for food. Also, fish, in quantity, could only be taken seasonally and in special localities. This applied especially to whitefish.

Although important in the human diet, fish were more important as food for dogs and as trap bait. Fish were one thing that the Mistassini felt were proper to feed dogs. Meat from game animals was rarely so used and then as a rule, only that of hare.

The flora supplied limited quantities of berries.

Besides the use of the fauna and flora for food, the furs from certain animals were sold to trading companies located at the south end of Lake Mistassini. By this means, the Mistassini were able to procure, to a limited extent, food and articles of Euro-Canadian manufacture.

Table 3. Number and weight of the game taken by the Matoush hunting group, September 1953-May 1954.[a]

	Number[b]	Poundage	Totals (lb.)
Fish	1672	3344.0	3344.0
Moose	10	4000.0[d]	
Caribou	12	1500.0[d]	
Bear	1	210.0[d]	
Beaver	55	2340.0[d]	8050.0
Hare	74	111.0[d,e]	
Muskrat	107	214.0[d,e]	
Porcupine	7	70.0[d]	
Squirrel	32	8.0[c,e]	
Marten	5	5.0[c]	
Otter	10	90.0[c]	
Weasel	205+		
Fox	5		
Mink	149+	37.3[c,e]	535.3
Loon	12	48.0[c]	
Geese	12	66.0[d]	
Ducks	152	258.4[a]	372.4
Grouse	441	220.5[c]	220.5
Tern	1		
Owl	3	1.5[c]	1.5
			12,523.7

[a] Calculated with weight of Black Duck (White 1953: 396-98).

[b] The figures here do not always agree with those published in Rogers 1963*a*: 35. Field-notes were examined to arrive at the present figures and a few entries were missed, as was the case when Table 1 was prepared. The extent of divergence is small and therefore, does not invalidate any statements made or conclusions drawn from these data.

[c] Estimates from personal observations.

[d] Weights from White 1953: 396-98.

[e] Few utilized as food.

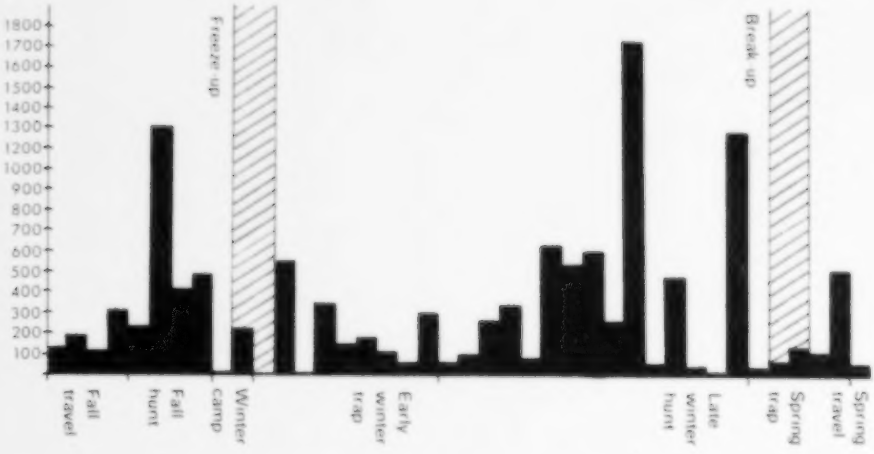
As can be seen, the Mistassini made extensive use of the natural environment in their quest for food and furs. All major species of wildlife were used in some manner (*see* Table 3). "Big game" was the most important source of food, providing as it did 64 per cent by poundage of all the fauna taken. Fish were next in importance, making up 27 per cent of the fauna. Small game made up four per cent and waterfowl and grouse provided five per cent. Not all of the game was used as food. Many fish were fed to the dogs, and some of the smaller species, such as fox and weasel were not eaten. But this was a relatively small percentage. Also only one hunting group was investigated; this group may not have been typical and perhaps depended more on the land than other groups did.

The remaining 30 per cent of the food required by the Matoush hunting group was obtained in exchange for furs or else by direct government allowance. This particular group, one of the more prosperous groups within the Mistassini community, netted approximately $2,500 in fur sales.

Table 4 Poundage of game taken weekly

	Fish	Moose	Caribou	Bear	Beaver	Hare	Muskrat	Porcupine	Squirrel	Marten	Otter	Weasel	Fox	Mink	Loon	Geese
Fall travel	92					3									8	
	138					43.50			0.50							
	86					7.50					10					
	298						10		0.50							
Fall hunt	203						16								4	
	10	1200														5.50
	168			210			28									
	60	400					2	10								
Winter camp	12								0.25							
	232													0.25		
Early winter trap														1.00		
		400			115	3			1.50		20			2.25		
									0.50					0.25		
	116				154		8	20	0.75		20			5.00		
	48				38.50	13.50	6		0.50		10			2.00		
	41				115	1.50	2							1.75		
	36				76	3	2							4.25		
					38.50											
	60				230	1.50			0.75					2.50		
Late winter hunt	50															
					76				0.25					2.25		
	214				38.50	6								1.25		
	200				115	7.50			0.25	1	20			1.25		
	88		125						0.25							
	384				230	10.50			0.25	1				1.75		
	144				385	6	2		0.75					2.75		
			250		345									4.00		
	142				115	3								1.50		
	78	400	1125		38.50				0.50							
	52							10	0.50					0.25		
	22	400			38.50	1.50		20		2				0.50		
					38.50					1						
	16													2.25		
		1200														
Spring trap	40						2									
	40															5.50
	34						14	10			10					27.50
	40						18							0.25	8	16.50
	152				154		98								28	11.00
Spring travel	44						6				10					

Otter	Weasel	Fox	Mink	Loon	Geese	Ducks	Grouse	Tern	Owl	All game
				8		24.50				127.50
						1.75	0.50		1	184.25
0						1.75	0.50			122.50
						5.30				313.80
				4						233.00
					5.50		0.50			1216.00
										406.00
						12.20	1			485.20
							10			22.25
			0.25			1.75	0.50			234.50
			1.00			3.50	2.50			7.00
0			2.25				23		0.50	565.25
			0.25				8			8.75
0			5.00				23			346.75
0			2.00				24.50			143.00
			1.75				11.50			172.75
			4.25				14			135.25
							19			57.50
			2.50				10			304.75
							12.50			62.50
			2.25				19.50			98.00
			1.25				5.50			265.25
0			1.25				4			349.00
										213.25
			1.75				7.50			635.00
			2.75				7			547.50
			4.00				0.50			599.50
			1.50				7			268.50
							0.50			1642.50
			0.25				0.50			63.25
			0.50				2			486.50
							1.50			41.00
			2.25				1			19.25
										1200.00
						1.75				43.75
					5.50	10.50	3			59.00
0					27.50	50.80				146.30
			0.25	8	16.50	50.10				132.85
				28	11.00	77.00				520.00
0						1.75				61.75



Graph 6. Poundage of game taken each week

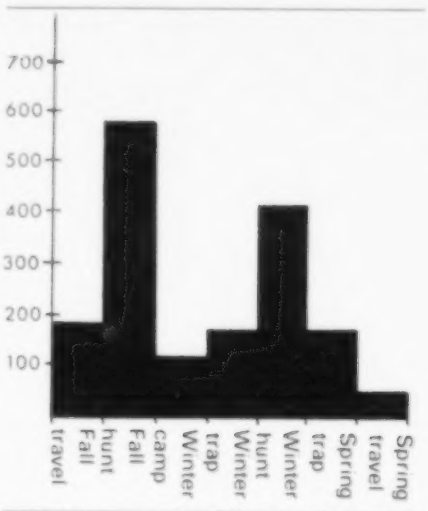
They received, in addition, approximately $500 by way of relief. Table I, p. 8 shows how this income was obtained and spent.

The seasonal take of game, previously mentioned, is of interest (*see* Table 2, p. 48). As is to be expected, fur bearers were secured primarily during the Early Winter Trapping period and during the Late Winter Hunt. During these two periods large numbers of grouse were also taken. During the spring and fall, but not summer, many waterfowl were taken. Big game was killed primarily during the Fall and Late Winter Hunt.

The weekly poundage of food secured varied greatly (*see* Table 4 and Graph 6), from seven to 1,600 pounds. This reflects the extremely hazardous conditions under which the Mistassini lived. Starvation was always a threat if food was not present in camp and the yield was not above seven pounds a week for several weeks in a row.

The extreme variation in weekly poundage is accounted for, in part, by the fact that big-game animals which yield high weights were only taken sporadically. Nevertheless, during the Fall and Late Winter Hunt, when the main intent was to secure as much food as possible, the average weekly weight of the game taken was highest, ranging from about 400 to nearly 600 pounds (*see* Graph 7). During the periods of Fall Travel, Early Winter Trapping and Spring Trapping, the take was less, averaging about 180 pounds per week. During the period of Winter Camp Construction, and especially during Spring Travel, the poundage of game taken was lowest of all. The Mistassini made an adjustment to the seasonal availability of game, the necessity to perform other activities such as trapping fur-bearing animals, travel and camp construction. Table 5 gives the hours per week required for a man to perform each of the four major activities.

Game-dressing techniques, like Mistassini technology, were relatively simple. Pelts were either removed in a cased condition or else open. The carcasses of game animals were dismembered, usually at the joints. It was rare that the bones were cut through except when broken up for bone soup or fashioned into tools. Birds were plucked and gutted and sometimes cut in half for smoking. Fish were either scaled or skinned, then gutted and slit down the back. There were innumerable minor variations in the techniques for dressing game. All of these techniques were efficient, suited to the needs of the Mistassini, and designed to salvage as much of the edible parts of the game killed as possible.



Graph 7. Weekly average poundage by economic period.

Since the Mistassini possessed a relatively simple technology and exploited a fauna which was, in general, solitary and dispersed, certain features of their social organization can be considered adaptations for the most efficient exploitation of the resources. The Mistassini, for the greater part of the year, were dispersed in small hunting groups. Only during the summer did a number of these groups come together in a settlement at the south end of Lake Mistassini. The size of each hunting group was limited by the resource base and transportation techniques prevented use of larger territories to increase food production (Rogers 1963*a*). Group structure was flexible, making it possible to adjust easily to changing environmental conditions. If famine occured, fission of the group could easily occur or it could move into another group's territory without being resented. Hunting patterns were conditioned by the nature of the game secured.

Table 5. Hours of work per man per week for four major activities, according to seasonal period.

Seasonal Period	Travel	Hunt	Fishing	Trapping	Subsistence activities	Total
Fall travel	18	9	4	8	21	39
Fall hunt	24	16	2	8	26	50
Winter camp construction	0	0	1½	16	17½	17½
Early winter trapping	0	2	1⅓	48	51⅓	51⅓
Late winter trapping	8	12	1	25	38	46
Spring trapping	10	8	3	19	30	40
Spring travel	48	0	3	8	11	59
Average	15	6.7	2.3	18.8	28	43

Since caribou generally gathered in small herds they were most effectively hunted by a cooperative effort of the men of the hunting group. Caribou were the only animals found in fairly large groups but even caribou herds were not sufficiently large to require more than one hunting group. (Knight 1965: 38–40). Other game and fur bearers were most effectively secured by one or two men.[1] The men did not cooperate for the actual hunt but, rather, ensured that in case of accident there would be help available.

Waterfowl were hunted either singly or in small groups. But the habits of these birds and of grouse were such that a group effort was not necessary. A large group was not required for fishing either and usually one or two men, or a man and his wife, or sometimes two women worked together. The nature of the food supply was such, therefore, that only a limited amount of cooperation on the part of all the men of the hunting group was necessary in hunting any particular species.

Since game animals, as a rule, were relatively small and secured in small quantities, processing was a simple matter and was usually carried out by the family whose male head had secured the game. If a kill of large game had been made, then all the men would cooperate in skinning, butchering and transporting the meat and hides to camp. After it had been distributed among the member families then they took care of it themselves. With other game, distribution was usually within the family although on occasion there was some inter-family distribution. In general, each family head was capable of supplying the needs of his family and there was no necessity for an exchange of food except in the case of caribou, moose and bear. And of course, there was no surplus that could be accumulated for exchange.

The food secured through hunting and from the store was usually consumed within the family. There were a series of feasts, which were often religious in nature, at which food was distributed to the member families of the group who gathered together. But, the harsh conditions under which the Mistassini lived, forced them to spend much of their time in the quest for food and furs. Leisure time in which to evolve, if they had so desired, an elaborate feasting system or ceremonialism based on a surplus production of food and furs was limited. This is indicated by the estimates given in Table 5, p. 80 of the hours spent weekly in travel and subsistence pursuits for each period of the year. And even with the number of hours expended in the search for food, the average hourly poundage of meat was not large (*see* Table 6). In addition, it must be remembered that there were other activities which had to be attended to and which would increase the number of hours that a man was active each week.

As can be seen, the family was the basic unit in obtaining and distributing food and furs, in consuming the food secured from the land and spending the returns obtained from the sale of furs. Actual cooperation

[1] Recent information from Fort Albany and Attawapiskat, Ontario, suggests that this is not correct. Poundage of game taken per hunter appears to increase as the number of hunters within a given area increases even though they may hunt singly or in pairs. There is, of course, a finite limit to the number of hunters who can exist in any one territory. Unfortunately the sample on which this statement is made is very small and may not be valid.

Table 6. Poundage of game per man-hour per week, according to seasonal period.

Seasonal period	Poundage
Fall travel	2.2
Fall hunt	5.5
Winter camp construction	1.8
Early winter trapping	0.9
Late winter hunting	2.8
Spring trapping	1.2
Spring travel	1.4
Average	2.3

among men was limited, although in general two men worked together. Men rarely stayed out overnight alone, and usually two men from different families hunted and trapped together. Only when caribou were sought did all the men of the hunting group cooperate as a unit. Female cooperation was even more limited. Women generally worked alone, although in outdoor tasks, it was usual for a mother and daughter to cooperate. Occasionally, all the women collected berries together, but each collected for her own family. Group cooperation in which all members joined occurred only at feasts and when travelling to and from the hunting territory.

In conclusion, the social and religious features mentioned in this study were adaptations by which the Mistassini, with a hunting economy and a relatively simple and limited technology, exploited the flora and fauna of the eastern subarctic. These adaptations allowed the Mistassini Cree to exist for generations in south-central Quebec.

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